PRACTICAL PHYSIOLOGY.

Lectures ON EXPERIMENTAL PHYSIOLOGY.

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LECTURE VIII.

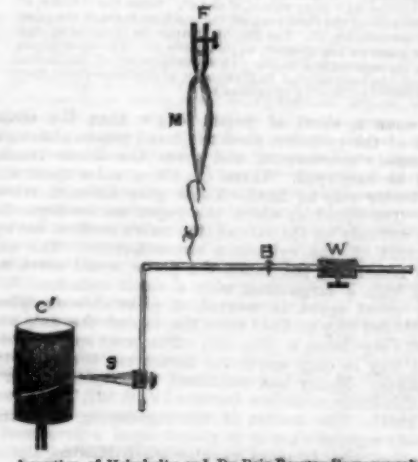
MUSCLE.

GENTLEMEN,—Having studied the experimental physiology of the nervous system, we shall now occupy ourselves with the practical physiology of muscle.

The forms of energy produced in muscle are:—1. Molar or mechanical motion. 2. Molecular motions—to wit, thermal, sonorous, and electrical motions. These molecular motions will be studied by us upon a future occasion. To-day we shall confine ourselves to the ordinary or mechanical motion of the muscle.

The irritants which cause a muscle to contract have already been studied by us.* Let us now study the contraction itself. To enable us to do this we must register the movement of the muscle by means of a recording apparatus. When we measured the rapidity with which nerve-force passes along a nerve, we employed a myograph invented by Helmholtz. We blacken the cylinder of the

FIG. 26.



A portion of Helmholtz and Du-Bois Reymond's myograph. *C'*, Revolving cylinder. M, Muscle (gastrocnemius of frog). F, Forceps holding the femur. B, A lever. W, A movable weight for the purpose of balancing the lever upon the fulcrum (just under B). S, A steel needle for the purpose of scratching the soot off the blackened cylinder, and thereby producing a tracing.

machine by means of turpentine smoke, attach a muscle to the lever (see Fig. 26), and stick the ends of two thin wires connected with a Du-Bois Reymond's induction coil (see Fig. 9, p. 296, vol. i. 1871) through the muscle, one close to the femur, the other close to the tendo Achillis. We set the machine in motion. As you already understand from my description of the instrument (p. 296, vol. i. 1871), the machine causes a single induction shock to pass through the muscle the moment that the cylinder, driven by clock-work, attains a speed that has been regulated beforehand. The writing-stilette (s) scratches a horizontal line upon the blackened surface of the cylinder while the muscle is at rest; but when the muscle contracts it raises the lever and the stilette, so that a curve is produced upon the cylinder. By taking off the cylinder and running it along a sheet of moist gelatine, we readily print such a tracing upon a flat surface. (Fig. 27.) When we examine this myogram, we

FIG. 27.

a, s, A myogram or tracing produced by the gastrocnemius of the frog, with the aid of Helmholtz's myograph.

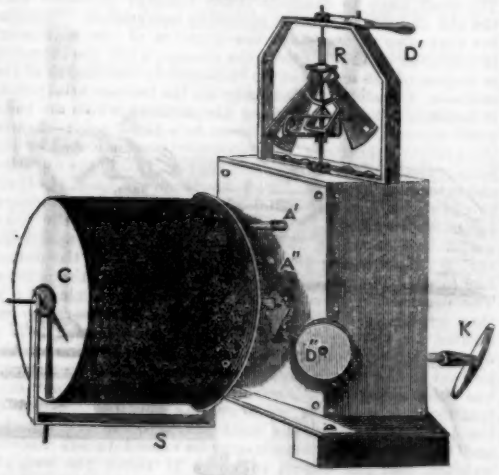
find that there are two lines—a horizontal line (*a, x*) and a curve (*a, z*). The horizontal line—also called the abscissæ—is produced by the writing-point when the muscle is at rest. In this myograph, the cylinder revolves several times, with the stilette or writing-point in contact with it, before contraction of the muscle is produced. In other kinds of recording apparatus the normal line requires to be drawn under such a curve. This abscissæ is, as it were, the zero line; it indicates no action. The length of the curve indicates the time occupied by the contraction of the muscle; and this time may be readily ascertained by measuring the length of the horizontal line under the curve, and comparing it with the speed with which the cylinder moves when the curve is produced. I shall presently explain to you how, in another kind of recording apparatus, the speed of the cylinder's motion at the time when the curve is produced is readily ascertained by recording upon it the vibrations of a pitch-fork. The *length* of the abscissæ, or horizontal line, serves then as an index of the *duration* of a movement such as that of a muscle recorded in this way. The *height* of the curve above the horizontal line indicates the *intensity*, degree, or extent of the movement. The higher the curve, the more has the muscle contracted. We measure the height of the curve by drawing at any number of points vertical lines or ordinates (such as that at *h r*). We shall have to examine many tracings produced with the aid of instruments for recording movements. Remember these two points—that the duration of the movement is indicated by the length of the *abscissæ*, while the intensity or degree of the movement is indicated by the length of the *ordinate*. Duration and intensity are the two essential points to be attended to in studying the motions which are indicated by such curves. But there is a third point—to wit, the general character of the movements as indicated by the form of the tracing. The form is the resultant of the duration and intensity. Duration, intensity, form, are, then, the three things to be borne in mind in the study of such tracings. In the above myograph, we know the point on the horizontal line at which the electrical shock is transmitted through the muscle; that point is indicated by the dotted line (*o, y*). The muscle begins to contract at the point *a*. The contraction increases till it reaches a maximum; it then gradually diminishes, and finally disappears, as indicated by the right side of the curve. Notice that a distinct interval elapses between the application of the irritant to the muscle and the contraction. This interval has been named by Helmholtz the period of latent contraction. A scale-pan with weights may be attached to the lever just under the hook which holds the muscle, and in this way the muscle may be caused to lift various weights, and the extent to which it raises the weights can be accurately observed. When we merely want to ascertain the extent to which the muscle can raise a weight, it is not necessary that the writing-point should write upon a moving surface. A vertical line, produced by causing the muscle to contract with the stilette in contact with a motionless surface, is sufficient. Pflüger constructed a myograph in order to give such vertical tracings only. The surface on which the tracing is produced is a motionless piece of flat smoked glass. Such a tracing, however, indicates only the extent or intensity of muscular contraction. The duration and the general character are not shown as they are when the tracing is produced upon a moving surface. Many forms of myograph have been invented; but the most convenient and the most satisfactory one

* Lecture II., THE LANCET, vol. i. 1871, p. 75.

in every way for studying the nature of muscular contraction is Marey's. Fick's myograph—consisting of a flat glass plate fixed at the free end of a pendulum—and Helmholtz's myograph* are still used, however, for estimating the rapidity of nervous transmission. Much service has been done to physiology by Marey having insisted on the necessity for having the apparatus to be used for recording movement as light and of as little bulk as possible. This great brass lever of Holmholtz's myograph is a heavy thing. No doubt it can be balanced by means of the weight (w, Fig. 26), so that scarcely any weight has to be borne by the muscle. At first you might be inclined to suppose that this balancing of the lever and consequent lightening of the weight borne by the muscle ought to serve the same purpose as if the lever were made of a light thing like a straw. It is not so. The mass of the one is far greater than the mass of the other. The thick brass beam, however delicately balanced, requires far more force to set it in motion than is required to set in motion a straw similarly balanced. And just as it is more difficult to move the one than the other, so it is more difficult to stop the motion of the one than that of the other. The one most difficult to move is also the one most difficult to stop. In other words, the momentum of the heavy body is greater than the momentum of the light one. In consequence of this, very fine movements are lost when, in order that they may be registered, they require to throw heavy bodies, such as a heavy lever or a column of mercury, into motion; and, moreover, the great oscillations of the heavy body which follow from its being thrown into motion introduce sources of fallacy in the tracings of movements effected by their aid. To register movement, Marey has therefore introduced the use of a light instead of a heavy lever, and, where it is possible, a column of air instead of a column of mercury. We are not to-day going to transmit any movement through a column of air, or a column of mercury; but it is convenient that I just allude to these things in this connexion.

The recording apparatus employed by Marey is one which may be conveniently adopted for registering the movements of the muscular, circulatory, and respiratory organs.

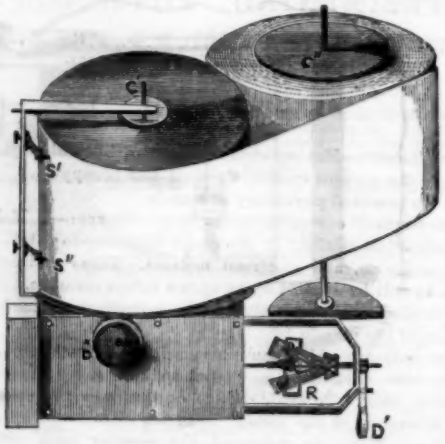
FIG. 28.



Marey's registering apparatus, with Foucault's regulator, R. C, Cylinder, here covered with smoked paper. S, Support for the cylinder. K, Key for winding up the clockwork. D'', A drag for stopping the movement of the cylinder by retarding the motion of its axle. D', A drag for stopping the motion more rapidly by arresting the revolution of the axle of the regulator, R. A', A'', Axles upon which the cylinder may be fixed, in order to obtain different rates of speed.

It consists of a brass cylinder, turned by clockwork, moved by a powerful spring. The cylinder may be placed horizontally (Fig. 28) or vertically (Fig. 29). It is covered with paper when a tracing is to be taken. The paper should be glazed, in order to diminish the friction of the writing point. Tracings may be made by writing upon the paper with ink, or by scratching the soot from paper that has been smoked by causing the cylinder covered by paper to revolve rapidly in the smoke of a paraffin lamp, or, indeed, in the flame of ordinary gas. When tracings are

FIG. 29.



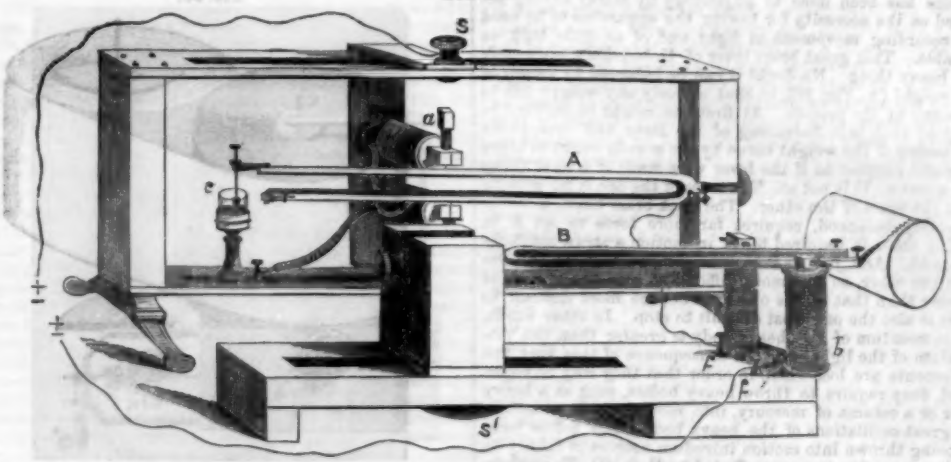
The same apparatus as that represented in Fig. 28, laid upon its side. Its cylinder, C', is now in a vertical position. The apparatus is here adjusted for taking a tracing upon a continuous piece of paper, of indefinite length. The paper is wound upon a spindle, C''; it is firmly held upon the cylinder, C', by means of springs with ivory wheels, s' and s''. When the cylinder, C', is rotated by the clockwork of the machine it drags the paper off the cylinder, C''. The graphic instrument is placed against the paper on the cylinder, C', just above D''. The other letters are the same as in Fig. 28. (This arrangement of the instrument has been adapted by Hawkesley, of Blenheim-street, from Ludwig's registering apparatus.)

taken upon a sheet of paper longer than the circumference of the cylinder, smoked glazed paper, although it is extremely convenient, and gives the finest tracings, cannot be employed. There are three axles upon which the cylinder may be fixed. These give different rates of speed. The speed at which the paper moves depends, of course, not only on the rate of the axle's motion, but upon the extent of the cylinder's circumference. The axle's motion remaining the same, the paper would move more rapidly with a large than with a small cylinder. When a very great speed is wanted, a glass disc or cylinder of cardboard may be fixed upon the top of the axle which bears the regulator, R (Fig. 28). The great speed obtained in this way is only useful for measuring the rapidity of nerve-force. Marey has estimated the rapidity with the aid of this instrument (see Lecture IV., p. 297, THE LANCET, vol. i. 1871). The motion of this registering apparatus is extremely regular when it is placed upon a level surface. Its motion, too, is more regular when the regulator is placed upright (Fig. 28) than when it is laid upon its side (Fig. 29). In order to provide against errors which would inevitably arise from unequal motion of the cylinder, we require, for all work that must be perfectly exact, to register upon the paper a tracing produced by some instrument which marks time with precision—e.g., the oscillations of a pendulum, a metronome, or a pitch-fork. The latter instrument, first used for this purpose by Thomas Young, is employed when the duration of rapid motions like muscular contractions is to be ascertained. I show you the pitch-forks employed for this purpose. (See Fig. 30.) This pitch-fork apparatus is constructed by König, of Paris. It consists of several pairs of pitch-forks of different lengths. One ought to be provided with two pairs, one giving 30, the other 120, double vibrations, in a second. A *pair* consists of two forks which vibrate in unison. One fork (B) is employed for recording the vibration; the other (A) is used for the purpose of causing the first to vibrate. The forks are fixed in steady wooden frames, and they can be moved backwards or forwards in these frames, and fixed in position by screws (s and s'). There are two electro-magnets (a and b), one in relation to each fork.

* Loc. cit.

The soft iron cores of these magnets do not touch the forks in any way, but when electrified they attract the limbs of the forks, and so cause them to move. Indeed, the forks vibrate before the magnets just as Neef's hammer vibrates before the electro-magnet of an ordinary galvano-induction machine. The forks are kept constantly vibrating by a galvanic current derived from two Grove's cells. Sometimes you may require three cells, but the current must not be

FIG. 30.

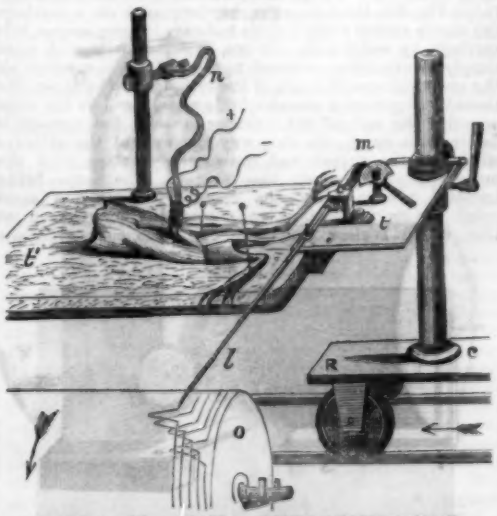


B, Pitch-fork for recording its vibrations upon a cylinder, or any surface on which tracings are to be taken. s', Screw for fixing the block holding the pitch-fork, so that the latter may be drawn backwards and forwards. A, A second pitch-fork; one limb has a stilette which, during the vibration of the pitch-fork, dips into mercury contained in a glass cup c. s, A screw corresponding to s'. a, An electro-magnet for driving the pitch-fork A. b, A similar magnet for driving the fork B.

too strong, else it causes the forks to rattle against the soft iron of the magnets, thereby greatly disturbing the vibrations of the forks. We always require to set the first fork A, and it may be the fork B also, vibrating by striking it with a pencil, or some such thing (never touch the steel with your fingers), and once they are set agoing the electricity keeps them vibrating in this way: The electric current passes along the wire to S, thence to the coil *a*, thence to mercury in a cup (*c*). When the upper limb of the fork A descends, it dips into the mercury a platinum point, and so forms the electrical contact; the electricity passes along the fork A, the wire connecting this with the coil *b* by the screw *f*, from thence to the battery along the wire joining it with the screw *f'* at the other end of the coil *b*. During the vibration of the fork A the platinum point is repeatedly breaking and forming the electrical circuit, so the electro-magnets are being magnetised and demagnetised with every vibration, and their attractions for the forks in this way established and undone. Hence the fork A merely serves to drive B. You may possibly say, Why have two forks? Would not the fork A alone suffice? Certainly, if the cylinder, for example, on whose surface its movements are to be recorded is placed vertically. But if we place the cylinder horizontally (as in Fig. 30), we cannot on account of the mercury turn the fork upon its side, and so we require another fork placed horizontally. The pitch-fork which I advise you to commonly employ is the one which gives 120 double vibrations per second. If you use a lever for recording the movement of a frog's muscle, for example, upon a cylinder, the writing point of the pitch-fork should be placed directly below the writing point of the lever, so that the time occupied by any part of the tracing produced by the muscle may be ascertained by comparing it with the vibration of the pitch-fork written immediately below. (See Fig. 32.)

Marey has invented for us two most simple and useful myographs. One of these (Fig. 31) is used for frogs' muscles; the other (Fig. 36) is employed for human muscles, or for examining the muscles of the limbs of the larger animals, without removing them from the body. The frog myograph (Fig. 31) is simply a light lever of the first kind (*l*), bearing at its one end a pointed piece of steel or aluminium for tracing upon blackened paper or glass, or a curved aluminium pen for carrying ink. A spring is fixed to the other end of the lever. The end of the spring is in contact with an eccentric, which can be adjusted so as to cause the muscle to overcome greater or less resistance during its contraction. The gastrocnemius muscle is that usually employed; it is attached to the lever by means of a

FIG. 31.

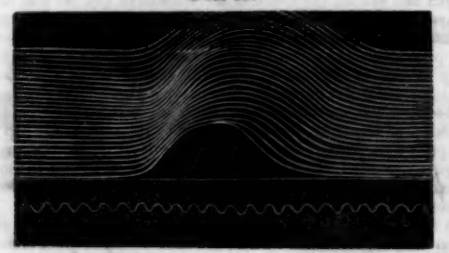


Marey's frog myograph.—*l*, The myographic lever, to which the tendo Achillis is connected by a fine wire. *m*, Spring at end of lever, in contact with an eccentric. *t*, Table bearing the myograph. *t'*, Cork table on which the frog is laid; the leg is fixed in position with pins. *n*, A leaden rod bearing electrodes for irritating the nerve; it is made of lead in order that it may be bent into any form, so as to reach any part of the table. *c*, Cylinder of register moving in the direction indicated by the arrow. (The cylinder ought to have had a blackened surface, and the lines upon it ought to have been represented white.) The myograph is screwed to a vertical rod (*o*), and this is borne upon a carriage which moves upon a railway in the direction indicated by the arrow under the carriage. (After Marey.)

thread or wire wound round or passed through a hole in the tendo Achillis. The limb is fixed by pins to a cork table (*t'*). The sciatic nerve is exposed, and two thin wire electrodes are

passed under it, so that the nerve may be irritated at pleasure. This apparatus works admirably. The lever is very light and easily moved, so that extremely fine muscular movements are recorded by it; moreover, being light, it acquires very little momentum, and hence oscillations due to this momentum are almost quite absent—indeed, if the point of the lever press a little upon the paper, so as to cause a little friction, the tracing produced by the writing-point is practically a faithful record of the condition of the muscle. This apparatus may be employed for many purposes—e. g., to study the effect of cooling, heating, or electrifying the nerves or muscle, depriving them of blood, or supplying them with poisoned blood, &c. Generally it is necessary to study the curves produced by contractions repeated at intervals extending over a considerable period. These successive curves might be written with ink upon a long piece of paper (see Fig. 29); but this is inconvenient on account of the difficulty experienced in keeping the pen supplied with ink, and also the waste of paper which it involves. It is better to take the successive tracings upon smoked paper in a single coil around the cylinder. For the purpose of readily comparing one curve with another, the muscle or nerve may always be irritated exactly when the pen, during the revolution of the cylinder, reaches the same point upon the cylinder's surface. The irritation of the nerve can be readily effected by causing the cylinder, when it attains the same point in its revolution, to break and rapidly close an electrical circuit. In this way, when the cylinder revolves, the muscle is made to contract always when the cylinder has completed its revolution. When the muscle is at rest, the lever describes a straight line upon the cylinder's surface; but when the muscle contracts, a curve is the result. If this were repeated many times, the successive curves would all be made on the same part of the cylinder, and nothing but confusion inevitably result. To avoid this, the lever must be made to describe its curve upon a new part of the cylinder at each muscular contraction. This may be effected by causing the myograph to move slowly from the one extremity of the cylinder to the other, so that it may describe a gentle spiral upon its surface. When the cylinder is placed horizontally (as in Fig. 31), the myograph may be placed on a carriage (B) slowly moved along a little railway. Marey moves this carriage by watchwork. It can, however, be moved more simply by attaching a thread to the end of the carriage on the one hand and the axle of the cylinder on the other, the thread being carried round a little wheel fixed to the table opposite the end of the cylinder to which the carriage is destined to move. In this way the axle of the cylinder winds up the thread and draws the carriage with the myograph slowly along the railway. The nerve being irritated always when the cylinder attains the same point in its revolution, we obtain a tracing such as that which I show you. (Fig. 32.) The curves indicate

FIG. 32.



Tracings produced by Marey's frog myograph. (See text.)
(Diapason, 100 double vibrations per second.)

successive contractions of a healthy frog's gastrocnemius. The lowest curve was first produced. The curves become longer and lower as fatigue of the muscle appears. The curves begin on the left side of the figure. The vibrations of a pitch-fork are represented below. In Fig. 33 each great curve is, as in Fig. 32, produced by a *single* shock of faradic electricity transmitted through the sciatic nerve. Observe the vibrations at the crests of the curves, due to slight tetanus. As in Fig. 32, the commencement of the contraction is indicated by the left side of the curve. Another simple mode of altering the position of the tracing upon the cylinder's surface is that which we owe to Dr. Sibson. It is used with the cylinder in a vertical position. There is a little square board which serves as a table, on which the myograph is

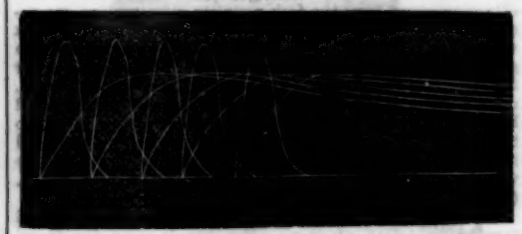
FIG. 33.

A tracing, taken in the same way as that in Fig. 32 (see text), from the gastrocnemius of a frog poisoned by strychnia. (After Marey.)

placed. Attached to the lower surface of the board is a tube. This fits into a second tube attached to the upper surface of a pedestal. The two tubes glide within one another like the tubes of a telescope. When we begin the experiment, we draw out the telescope tubes, and place the myograph upon the little table which they support. The tubes are now full of air, which can only find exit through a stopcock. When the air is allowed to escape, the table with the myograph descends, and the rapidity of its descent is regulated by the rate at which the air is allowed to escape; this can be nicely regulated by the stopcock. This apparatus is the simplest of all.

But the curves may be still further separated from one another by causing irritants to act, not always when the cylinder has arrived at the same point of revolution, but when it has passed the preceding point for a short distance. (Examine the tracing on the cylinder in Fig. 31; and for an account of the manner in which this is done, see Marey "Du Mouvement dans les Fonctions de la Vie," Fig. 100. Paris, 1868.) Or, instead of causing the myograph to move along the cylinder so as to describe a spiral, it may be left at rest, and lateral position of two curves along a horizontal line (Fig. 34) be the result of irritation being communicated when the cylinder has described a little more than a complete revolution.

FIG. 34.



Curves produced by a double myograph.—A lever being connected with each gastrocnemius, the pairs of curves starting together from the horizontal line are due to simultaneous irritation of the sciatic nerves of both limbs. One gastrocnemius, that producing the lowest and longest curves, had been cooled; the other gastrocnemius was normal. The curves at the left hand of the tracing were first produced. (After Marey.)

A single myograph may be used in any of these ways, and much may be learned from it; but often when the actions of toxic agents on nerves and muscles are investi-

gated, it is necessary to compare one limb of the frog acted on by the poison with the other protected from the toxic agent by ligature of the bloodvessels of that limb. For this purpose we require to connect a lever with each gastrocnemius. The points of the two levers are placed one above the other on the cylinder's surface, so that the tracing produced by the one can be readily compared with that of the other. Indeed, the two points may in some cases be placed quite close together when they are at rest without the movement of the one lever interfering with that of the other. In this way we arrive at comparative results of the greatest value. For example, here is a tracing (Fig. 34) taken in this way when the gastrocnemius of one limb had been cooled. It shows at once that by cooling the muscle the contractions take place more slowly, and last longer, than they do in the normal state. Without a doubt this comparative myograph will yet render great service to the therapeutical investigator.

When we give a single galvanic or faradic shock to a motor nerve, or to the muscle directly, we produce a simple or single contraction of the muscle, provided the nerve and muscle be in a healthy condition. Even when the electricity is transmitted through the muscular fibres directly, there is, as we have seen, a distinct interval (*o*, *a*, Fig. 27) between the application of the irritant and the ensuing contraction. This interval—the period of latent contraction—occupies on an average the one-hundredth part of a second, while the entire contraction is, in normal circumstances, usually about the one-tenth of a second in the frog. (Compare the diapason vibrations with the muscle curves in Fig. 32.) Anæmia, cold, exhaustion, and various other influences lengthen the period of contraction. Sometimes in exhausted states of the muscle a single electrical shock gives rise to a number of contractions. A similar result is well seen when a motor nerve receives a single electrical shock in cases of strychnia poisoning. (Fig. 33.)

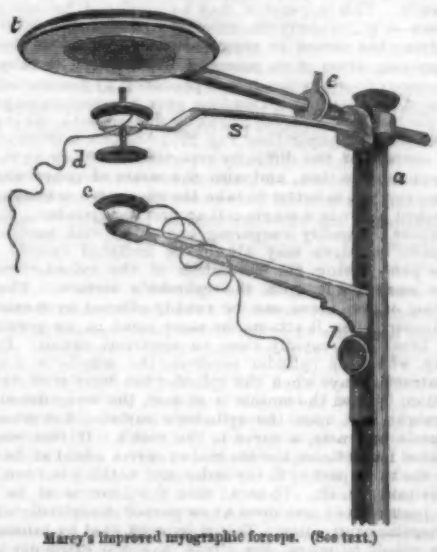
When I cause a rapid succession of irritants to act on the muscle directly or on the nerve, you see that a rapid succession of short contractions take place; and when the succession of the irritants is rapid enough an apparently constant contraction of the muscle is produced. This is tetanus. When we record the movement, the state of the muscle is rendered more evident than it is to the naked eye. (See Fig. 35.)

FIG. 35.

a, Curves produced by rapid contractions of frog's gastrocnemius. The first electrical shock produces a great rise (on the left side); the rapidly succeeding shocks produce short contractions. The great fall of the curve on the right side is due to cessation of the irritation. *b*, A curve produced by a succession of shocks as rapid as in *a* communicated to an exhausted muscle; the curves are almost completely fused together, indicating an almost constant contraction of the muscle. This is tetanus.

The myograph which we have used records the shortening of a muscle. Marey has invented another for the purpose of recording the muscular movement by registering the thickening which takes place in the contracting muscle. This myograph is chiefly used in experiments upon the rapidity of motor nerve transmission in man. It is worth while examining the instrument, however; for it is the parent of some instruments recently made for registering respiratory, pulse, and cardiac movements. This myograph is commonly called the "myographic forceps." (See Fig. 36.)

FIG. 36.



Marey's improved myographic forceps. (See text.)

It is applied to the adductor muscles of the thumb. These are placed between two knobs (*c* and *d*). One of the knobs (*d*) is fixed to the end of a spring (*s*), the other (*c*) is fixed to a bar that can be moved up and down upon a supporting rod, by means of a screw (*l*). Wires to serve as electrodes, for irritating the clasped muscle if need be, are attached to the knobs. There is a little tambour or drum (*t*) containing air. The lower surface is covered with thin caoutchouc membrane, in the centre of which is a thin plate of aluminium. When the muscle contracts, the upper knob (*d*), already in contact by means of its supporting screw with the aluminium disc, is pressed upon the disc, so as to force the air out of the tambour. This air is expelled through a piece of tubing into another tambour, having a light lever which traces the movement upon a cylinder. (This will be illustrated in next lecture.) In connexion with the spring (*s*) there is an eccentric (*e*), which can be turned so as to vary if need be, the tension of the spring. This myograph, although valuable, is not of such general application as the one about which I have said so much. By means of this myograph, however, it has been ascertained that a voluntary muscular effort does not consist of only a single contraction, such as results from a single electrical shock to the nerve, but that it is made up of a rapid succession of short contractions, due, as Weber long ago suggested, to a rapid succession of nerve influences transmitted to the muscle. A voluntary contraction is, therefore, not a simple but a compound contraction. It is an interesting fact that at each systole of the heart a single contraction occurs. There is not a rapid succession of short contractions such as take place in the muscles of the thumb if they be kept in a state of contraction for a period as long as the contraction of the heart.

EDINBURGH VETERINARY COLLEGE.—The winter session was opened with an address from Principal Williams. It is fifty years since this excellent institution was commenced by Professor Dick with only one student. Dr. Davidson has been appointed to the chair of Anatomy, and Mr. Walley to that of Cattle Pathology. The growing importance of the diseases of cattle makes the efficiency of such colleges a matter of prime interest to the State.

ON SOME PHYSIOLOGICAL ERRORS CONNECTED WITH CHOLERA.

BY WILLIAM SEDGWICK, M.R.C.S., &c.

(*Concluded from page 508.*)

IT has been alleged in my late communication to THE LANCET (Oct. 7, 1871), that the radical error in Dr. Johnson's theory of cholera is unquestionably the attempt to prove that defective oxygenation of the blood from the assumed action of an assumed blood-poison is essentially connected with the phenomena of the disease. On the present occasion it is proposed to show the extent to which this error has involved its otherwise distinguished author in numerous and very serious difficulties; so that when, from time to time, his position has become physiologically less and less tenable, the unscientific tendency to substitute assumption for fact has become increasingly more pronounced. It is obviously owing to the difficulties of his position, and to an unmistakable inability to refute the evidence of a long list of trustworthy observers who have been cited in my paper "On the Continuance of the Mammary Secretion when the Urine is suppressed in Choleraic Collapse" (*Brit. Med. Journ.*, Sept. 19th, 1868), that Dr. Johnson has felt it necessary to turn aside from evidence which is fatal to his theory, and to proceed once more to assume that "this alleged immunity of the reproductive functions is a figment of Mr. Sedgwick's vivid imagination," (THE LANCET, Oct. 14th, 1871, p. 547.) In the following remarks on some of the evidence which has been lately adduced by Dr. Johnson himself in favour of defective oxygenation of the blood as essentially connected with the phenomena of cholera, it will be seen that no reliance can be placed either on the direct or the indirect support on which this theory has hitherto been supposed to rest.

The evidence contained in my paper "On some Analogies of Cholera in which Suppression of Urine is not accompanied by symptoms of Uræmic Poisoning" (*Med. Chir. Trans.*, vol. 51, 1858) has lately proved that excessive gastro-intestinal irritation leads to a central arrest of nutrition with the same condition of collapse as is met with in cases of cholera. This evidence, which has been fully corroborated by that of other observers both abroad and at home, has assisted to establish the fact that suppression of urine associated with arrested formation of urea is the correlative of suppression of the pulmonary function associated with the arrested formation of carbonic acid, and that both of these phenomena are equally referable to the condition of the alimentary canal. Among the corroborative evidence referred to above is an interesting "Case of Gastro-enteritis from local irritants simulating Cholera on two occasions in the same individual," observed by Dr. Murchison (*Trans. Clin. Soc.*, vol. 2, 1869, pp. 178-181), in which "not only was the collapse identical with that of cholera, but, as in cholera, the suppression of urine was on both occasions followed by temporary albuminuria." This occurrence of temporary albuminuria after previous diminution or suppression of the urinary secretion has been observed in a very large number of cases of gastro-intestinal irritation attended with collapse simulating the collapse of cholera; and I have succeeded in collecting a large number of trustworthy observations on this subject. It will be sufficient, however, for our present purpose, to cite the observations of M. Abeille, who, in his well-known work on the Urine, published in 1863, has called attention, under the heading of "Albuminuria in Affections of the Digestive Tube," to the frequency of its occurrence in certain cases of diarrhœa, to which he has applied the epithet of "choleriform." In eight out of fifteen cases of this kind which came under his own observation, there was vesical retraction and a very great diminution of the urinary secretion, with temporary albuminuria, which, at the most, lasted only from one to two days. In one of these cases, which M. Abeille relates as a type of the rest, a corporal, previously chilled whilst on duty, *drank a large quantity of cold water*. Symptoms closely resembling cholera soon afterwards supervened, including suppression of urine. "Not more," writes M. Abeille, "than fifteen grammes of *clear urine* were withdrawn by the catheter, which, tested by nitric acid and heat, was found to be albuminous. On the following day albumen was in like manner detected in the urine, but it subsequently disappeared." Mr. Abeille has also recorded the case of a soldier, who died from intestinal perforation (ileo-cæcal), in whom the symptoms closely resembled those of cholera. There was vomiting, coldness, *violet discoloration of the skin*, and scanty urine, which was alkaline and albuminous. As regards the urinary secretion, there is, indeed, throughout the progress of these cases, essentially the same sequence of phenomena as occurs in cholera—namely, temporary diminution or suppression of the urinary secretion; the development of a blue colouring matter in the urine; temporary albuminuria; and, finally, slight and temporary glycosuria, which usually occurs during convalescence, and precedes the re-establishment of the normal secretion. Whilst the order in which the constituents of the serum are drained off in the rice-water flux, as observed by Schmidt, of Dorpat, accords with that which takes place during the action of some purgative medicines, such as elaterium (*Dub. Quart. Journ.*, August, 1866, p. 152.) It would consequently be a physiological error to assume that defective oxygenation of the blood from the localised action of a specific blood-poison is necessarily connected with the phenomena of cholera; since there is a corresponding suppression of urine, followed by temporary albuminuria, in many cases of excessive gastro-intestinal irritation which are unconnected with epidemic cholera, and in which it must be admitted that the *origo mali* is the alimentary canal.

Notwithstanding the unexceptional character of the evidence derived from analogy in favour of the collapse and the resulting condition of the urinary secretion in cases of cholera being essentially the same as in cases of excessive gastro-intestinal irritation, Dr. Johnson, in what can only be regarded as an unfortunate attempt to weaken its influence, has, on the one side, denied that cyanosis occurs in those cases which have been referred to as analogous to cholera; and, on the other side, has asserted that temporary albuminuria is conclusive evidence of blood-poisoning. In a paper on "The Collapse of Cholera compared and contrasted with other Forms of Collapse" (*Med. Times and Gaz.*, May 5th, 1866, p. 465), he has informed us that "whereas in all other forms of collapse there is great *pallor* of the surface in consequence of a defective supply of blood to the minute vessels, in the collapse of cholera the surface is more or less *blue* in consequence of defective respiration and an accumulation of blood in the veins." Although italics have been introduced by the author in the above-cited passage to mark the importance which he has assigned to cyanosis as a diagnostic symptom, yet there can be no hesitation on the part of any clinical observer who has carefully watched such cases in at once admitting that Dr. Johnson has on this occasion committed a grave error in diagnosis, with reference to this supposed clinical discovery, for the distinction which he has here pointed out does not exist. If we examine the previous literature of the subject, together with the cases published since the date of the above-cited paper, it will be found that in many of the cases belonging to the class to which Dr. Johnson has specially referred, including those in which, as he informs us, the blood constituents "are drained away by excessive purging," those in which the effect has been produced by "perforation of the stomach or bowels," &c., cyanosis has been referred to as a frequent and a characteristic symptom, when the resulting collapse has been strongly marked. In a case of croton-oil poisoning fatal in four hours, cited by Dr. Taylor (On Poisons, 2nd edit., 1859, p. 568), "the extremities and face were as blue as in the collapsed stage of cholera." In Dr. Headlam Greenhow's case of croton-oil poisoning fatal in ten hours (*Med. Times and Gaz.*, Aug. 11th, 1866, p. 142), the skin was "even more blue than is usual in cases of true cholera." Cyanosis was likewise observed in two cases of poisoning by croton oil which were published more than ten years ago, and which have lately been cited by M. A. Chevallier (*Annales d'Hygiène Publique*, Avril, 1871, pp. 409, 410). Whilst, on the other side, in a case of poisoning by the inhalation of the dust of croton seeds, observed by Dr. Pereira ("Elements of Materia Medica and Therapeutics," 4th edit., 1855, vol. ii., part 1, pp. 406, 407), in which the irritant effect of the drug was limited to the lungs, and the

"bowels were not acted on," no cyanosis is said to have occurred. With regard to cases of perforation, obstruction, and acute inflammation of the alimentary canal, it may be sufficient to state that there was more or less well-marked cyanosis in cases of perforation of the stomach observed by Dr. C.-S. Cliet (*Gaz. Méd. de Paris*, 2 sér., t. xiii., 1845, p. 706), and by M. Salneuve (cited by M. A. Luton, "Recueil des Travaux de la Société Médicale d'Observation de Paris," t. i., 1857-58, pp. 382—386); in a case of perforation of the duodenum observed by M. Petrequin (*Archives Générales de Médecine*, 2 sér., t. xii., 1836, pp. 483, 484); in intestinal perforation by M. Abeille (*op. cit.*, 1863, p. 186); and in some cases of perforation observed by M. Louis, in which, as Dr. Stokes informs us (Cyclopædia of Practical Medicine, "Peritonitis from Perforation of the Serous Membrane," 1834, p. 313), the surface was "of a violet hue." Cyanosis was also observed in a case of rupture of the jejunum, by Mr. Curling (London Hospital Reports, vol. ii., 1865, pp. 287, 288); and in a case of obstruction of the jejunum, by Dr. Barlow (Guy's Hospital Reports, vol. ii., 1844, p. 379); in a case of internal strangulation, by Dr. Delaye, of Toulouse (*L'Union Médicale*, 1855, pp. 467, 468); in a case of strangulation of the ileum, which was almost unavoidably mistaken for cholera, and admitted as such into the Hôtel Dieu, Paris (MM. Fournier and Olivier, *Gaz. Méd. de Paris*, 15 Août, 1868, pp. 476—479); in a corresponding case observed by M. de Wouves, in November, 1867 (Du Choléra, 1868, pp. 216—218); and in a case of acute inflammation of the whole of the gastro-intestinal mucous membrane with peritonitis simulating cholera, observed by M. Champouillon at the Val-de-Grâce Hospital, Paris, in December, 1853 (*Gaz. des Hôpitaux*, 1854, p. 73). Cyanosis has frequently been observed also in rapidly-fatal cases of irritant poisoning by arsenic, corrosive sublimate, the mineral acids, &c., in which the primary effect produced is on the gastro-intestinal mucous membrane.

In addition to the occurrence of cyanosis in a large number of cases of excessive gastro-intestinal irritation, which has been emphatically denied by Dr. Johnson, there has not unfrequently been observed, as I have already stated in my paper on the analogies of cholera, well-marked pulmonary collapse in the same class of cases after death. This was specially noted in Dr. Cotton's case of perforating ulcer of the stomach (*Med. Times and Gaz.*, Jan. 12th, 1856, pp. 38, 39); and in M. Bucquoy's case of triple descending invagination of the small intestine at its superior part, in which the left lung was found completely collapsed, leaving a considerable void in the corresponding pleural cavity, and the right lung was found to be collapsed, though to a less extent on account of adhesions; both lungs in this case being otherwise healthy. The same condition of pulmonary collapse has likewise been observed in rapidly fatal cases of gastro-intestinal irritant poisoning, but the limited space at my disposal will not allow of more than a brief allusion to some of the cases of this description recorded in Casper's "Handbook of Forensic Medicine," especially to case No. 194, of poisoning by sulphuric acid, in which perforation occurred, and in which the lungs after death were found to be "remarkably anæmic"; and to two other cases, Nos. 197 and 198, also of poisoning by sulphuric acid, in both of which a corresponding condition of the lungs was observed.

On the other hand, it has been long since ascertained that there is a local disappearance of cyanosis during choleraic collapse, when galvanism is applied to a limb, which is independent of any effect produced on the pulmonary circulation. This was well illustrated by Dr. Favell, who was physician to the Cholera Hospital at Sheffield, during the first epidemic of the disease in this country, and who satisfactorily demonstrated that when galvanism was applied, for example, to the right upper limb of a cyanosed cholera patient, the blueness of that part disappeared; and that on galvanising the left upper limb, a correspondingly local effect was produced (THE LANCET, 1832-33, vol. i., pp. 711, 712). And, lastly, the fallacy of assuming that the cyanosis in cholera is due to defective oxygenation of the blood may be illustrated by what has been observed in the case of a warm-blooded animal during hybernation, when its condition, as regards both the circulation and the respiration, is reduced below that of a reptile, and yet the diminished supply of oxygen to the system is found to be accompanied by an increased redness of the blood.

The imaginary importance which, as we have already seen, has been very hastily and very incorrectly assigned by Dr. Johnson to cyanosis as a diagnostic symptom between cholera and gastro-intestinal affections simulating cholera, could not be expected, apparently even by the author himself, to give any real or permanent support to his theory of defective oxygenation of the blood; and, consequently, it was soon afterwards found to be necessary again to have recourse to fresh assumptions, one of the most noticeable of which is contained in his paper "On some points in the Pathology of Cholera and Apnœa" (*Brit. and For. Med.-Chir. Rev.*, April, 1870), in which the following statement occurs:—"Temporary albuminuria is, to my mind, conclusive evidence of blood-poisoning." The immediate occasion for this *ex cathedrâ* announcement was the publication of Dr. Murchison's case, already alluded to, of gastro-enteritis from local irritants simulating cholera on two occasions in the same individual, in whom suppression of urine was twice followed by temporary albuminuria; and it is obvious that if Dr. Johnson's statement, founded it is said on "conclusive evidence," were correct, the previously assumed existence of a specific blood-poison in cholera would immediately become an incontestable fact. In the apparently unavoidable absence of any information from Dr. Johnson himself respecting the nature and the extent of the "conclusive evidence" referred to above, and in the very unsatisfactory state of our knowledge respecting the character and the effect of blood-poisons in general, it will be difficult, though not perhaps impossible, for us to acquire some information on this subject for ourselves, which may assist us in proving that the application of the phrase "physiologically weak" to Dr. Johnson's theory of cholera is, strictly speaking, more courteous than correct, for the theory has been found to be physiologically unsound, and the extent of this unsoundness becomes more apparent after every fresh effort on the part of the author to retrieve his position. Since the time when, as Dr. Carpenter informs us, Magendie demonstrated that the injection of water into the veins of a dog was sufficient to cause the urine to become quickly albuminous, down to the time when Overbeck made the curious observation that compression of the renal arteries was also followed by temporary albuminuria, physiologists have usually entertained the opinion that temporary albuminuria is not necessarily due to the effect of a previous poison in the blood; and this opinion accords with the fact that a puncture in certain localities at the base of the brain is followed by the appearance of albumen in the urine. Moreover, in the temporary occurrence of albumen in the urine as a result of gastro-intestinal affections allied to cholera, the supposition of the previous existence in the system of a blood-poison is on many occasions precluded by the nature of the case itself; whilst its probable dependence in these cases on a central diminution or arrest of nutrition is strengthened by the observations of Rosenthal and others on albuminuria in inanition, especially when taken in conjunction with Ranke's experiments on himself, and those of Pettenkofer and Voit on dogs, illustrating the remarkable diminution of urea which occurs as a result of mere starvation; and, lastly, by the fact that towards the close of fœtal existence, when the gastric function is still undeveloped, the urine contains albumen, which there is no "conclusive evidence" to show is physiologically dependent on any sad tendency in the mother to poison unconsciously her offspring.

Again, in a lately published communication on the "Action of the Cholera Poison" (*Brit. Med. Jour.*, Aug. 13th, 1870, p. 180), Dr. Johnson, whilst endeavouring to secure some additional support for his theory, refers to "the interesting physiological correlation of the lung, liver, and kidney, as illustrated by their functional inactivity in the fœtus, and their energetic co-operation immediately after birth, when respiration is established." The inactivity of these organs in the fœtus, and the suppression of their secretion, are said to be "a necessary result of arrested pulmonary circulation and consequent apnœa," in consequence of which "the secretion of bile and urine by the fœtus is even more scanty than that of a patient in cholera collapse, while the abundant formation of those products by the new-born infant is analogous to the restoration of the biliary and renal secretions during the reaction from cholera." As the same argument was brought forward and discussed in a previous number of the same journal (February 17th, 1866), it is evident that considerable import-

ance has been attached to this "interesting physiological correlation," and that it has been much relied on for the purpose of proving that the suppression of urine in cholera is due to defective oxygenation of the blood. Now, as a preliminary step in the inquiry, it would no doubt be useful to prove that the assumed action of the assumed cholera poison is, with regard to its effect on the renal secretion, similar to that which naturally occurs during the pulmonary inaction of fœtal existence. But the argument from analogy which Dr. Johnson has here sought to establish between fœtal existence and the collapse of cholera cannot possibly be maintained, for the simple reason that suppression of urine does not occur in the fœtus. Abernethy, it is said, entertained the opinion that the kidneys did not secrete till after birth; but since Abernethy's time some progress has been made in the study of physiology, and it is now commonly taught and generally believed, on what deserves to be called good authority, that functional inactivity of the lungs is not associated with functional inactivity of the kidneys during fœtal existence. The allantois, it is now well known, receives in the first instance the secretion of the corpora Wolffiana, and at a later period the secretion of the true kidneys; the phenomenon of fœtal glycosuria, in the human subject and in some of the lower animals, has been specially studied by M. Claude Bernard and other distinguished physiologists; distension of the fœtal bladder, as a result of the urethra being imperforate, has been observed by Dr. L. Lehmann, Dr. W. D. Moore, and others who have written on the subject; difficulty in parturition from the enormous amount of this vesical distension consequent on urethral obstruction has been well illustrated in two interesting papers by M. Duparque and Dr. Depaul; and, lastly, chemical analysis has shown that, in addition to albumen and some of the usual salts, fœtal urine, especially at the full term of pregnancy, contains a highly nitrogenous principle which is closely allied to urea. It must consequently be admitted that a theory of cholera which depends for support on "the interesting physiological correlation" referred to by Dr. Johnson is physiologically weak; whilst the remarkable inaccuracy of his statement, that the secretion of urine by the fœtus "is even more scanty than that of a patient in cholera collapse," can only serve to strengthen the arguments which have been already urged against this theory in the recently published portion of the present paper.

As the chief importance of theories in disease is derived from the extent of their influence on practice, it has been necessary to notice somewhat more fully than would otherwise be the case some of the leading errors in this particular theory of cholera, in consequence of the attempts which have been made, through the medium of the non-medical press, to popularise the cathartic treatment which has been founded on it, and which has failed to gain the approval of the medical profession. The absence of any allusion in the late publications on the Pathology and Treatment of Cholera, by Sir Thomas Watson and Dr. Johnson, to the results of this treatment at any of the metropolitan hospitals, cannot fail to be regarded as a very significant fact. For, during the last epidemic of the disease in 1866, all the cholera patients admitted into King's College Hospital were under the immediate supervision of Dr. Johnson himself, and it is well known that the statistics of treatment on this occasion, showing a mortality of about 62 per cent. (THE LANCET, Nov. 17th, 1866, and Aug. 19th, 1871), are too unfavourable for quotation. In the University College Hospital, during the preceding epidemic of cholera in 1854, eight of the patients were treated with castor oil; but as only one survived, the treatment in consequence was changed. And the committee appointed during this epidemic by the Medical Council of the General Board of Health, to consider and report upon the treatment of cholera by castor oil, ascertained "that in eighty-nine cases of cholera treated by fourteen different practitioners with castor oil, on the plan recommended by Dr. Johnson, sixty-eight were fatal, recovery having occurred in only fifteen cases, while the six remaining cases were still under medical treatment" (*Med. Times and Gaz.*, Sept. 1854). Similar, if not even still more disastrous, results have attended this practice in India; and it would perhaps be impossible to cite a more painful illustration of the failure of the cathartic treatment of cholera than that which is derived from the experience of Dr. Macnamara ("A Treatise on Asiatic Cholera," pp. 460, 461, 1870), who "was acting as house-physician to King's College Hospital in 1854, when (during the decline of the epidemic) Dr. G. Johnson was treating his cholera patients on eliminative principles." Having sailed for India "full of confidence and hope in castor oil," Dr. Macnamara was left, he informs us, in the following year (1855) in sole charge of a field hospital at Bhaugulpore during a severe outbreak of cholera. There he "went boldly to work with castor oil (both among the Europeans and natives under his care); but it absolutely and completely failed, and the mortality from the disease was fearful." Notwithstanding this unfavourable result, he again tried it on several occasions, but subsequently the "castor oil method" was abandoned as "worthless." Since therefore the cathartic treatment, which has been founded on this theory, has signally failed, it can no longer be of any avail, in the struggle to support the theory itself, to act the part of a master of fence, or to be prematurely praised as its "triumphant advocate"; for the victory which has been claimed was virtually lost when the showy weapons relied on for defence had been proved to be unworthy of trust, and when the skill which might have been turned to good account had been wasted on a series of subtle feints, which may perhaps have delayed, but which could not ultimately avert, defeat.

Park-place, Upper Baker-street, Oct. 1871.

ANALYSIS OF 11,000 CONSECUTIVE CASES OF SKIN DISEASE.

BY DR. McCALL ANDERSON,

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THE object of the present papers is to afford statistics of 10,000 consecutive cases of skin disease met with in hospital practice, and 1000 consecutive cases met with in private practice, to compare the results, and to allude to a few of the more interesting cases. It must be borne in mind at the outset that no idea can be formed of the actual frequency of the different forms of skin disease from any statistics, seeing that one is most apt to be consulted with regard to those which are associated with derangement of the general health, which give rise to irritation, or which produce deformity; still less from the present statistics, which of necessity contain an undue proportion of obstinate and rare forms of disease.

It is unnecessary to dwell at any length upon the system on which these diseases have been arranged, especially as their classification is but a modification of that adopted many years ago at the Glasgow Dispensary for Skin Diseases as explained by the late Dr. A. B. Buchanan, in a very able article which he communicated to the *Edinburgh Medical Journal* (January, 1863). The object aimed at in this classification was to render it as useful as possible from a clinical point of view, and hence the most important point was to arrange the various diseases as far as practicable in accordance with their nature and cause. It is most desirable, no doubt, to have a classification in accordance with one principle; but in the present state of our knowledge it is impossible to fulfil the latter except at the expense of the former, and accordingly two principles are involved in this clinical classification—namely, the etiological and the pathological.

We divide skin diseases, then, into two great classes—namely, A, Functional; and B, Organic. The Organic we subdivide into two great classes—I. Those defined by uniform causes; II. Those not defined by uniform causes. The diseases defined by uniform causes are arranged under four heads—namely: 1, Parasitic affections; 2, Syphilitic affections; 3, Strumous affections; 4, Eruptive fevers. The diseases not defined by uniform causes comprise all affections of the skin not included in any of the preceding groups, and are arranged pathologically under three heads—namely: 1, Inflammations; 2, New formations; 3, Hæmorrhages.

CLASSIFICATION OF 10,000 CONSECUTIVE CASES OF SKIN DISEASE MET WITH IN HOSPITAL PRACTICE.

A.—FUNCTIONAL AFFECTIONS.

Pruritus	39	Melanopathia	1
Seborrœa	13	Vitiligo	4
Comedones	10	Atrophia cutis	2
Milium	1	Alopecia	56
Hyperidrosis	5	Hirsuties	2
Ephelis	3	Fragilitas crinium	3

B.—ORGANIC AFFECTIONS.

I. DISEASES DEFINED BY UNIFORM CAUSES.

1. *Parasitic Affections.*

Vegetable	Tinea favosa		156
	Tinea tricophytina	Circinata	54
		Tonsurans	67
		Circinata + tonsurans	3
		Sycosis	18
	Tinea versicolor		106
	Tinea decalvans		153
Animal	Scabies		2527
	Phtheiriasis		327

2. *Syphilitic Affections.*

Primary accidents	24
Secondary and tertiary accidents	437
Hereditary syphilis (infantile)	55
„ „ (non-infantile)	1

3. *Strumous Affections.*

Lupus	198	Strumous glands	191
Scrofuloderma	27	„ ulcers	85
Lichen scrofulosorum	3	„ abscess	8

4. *Eruptive Fevers.*

Morbilli	1
Scarlatina	2
Variola	6

II. DISEASES NOT DEFINED BY UNIFORM CAUSES.

1. *Inflammations.*

Erythema*	470	Erysipelas	10
„ multiforme	1	Acne vulgaris	288
„ nodosum	5	Rosacea	37
„ pernio	2	Psoriasis‖	725
Eczema†	2527	Pemphigus	12
Impetigo contagiosa	10	„ foliaceus	1
Ecthyma‡	97	Pityriasis rubra	6
Prurigo	1	Deep inflammations	345
Urticaria§	147	Ulcers¶	433
Zona	32	Onychia	10
Dermatitis	27		

2. *New Formations.*

Varix (uncomplicated)	41	Elephantiasis Græcorum	1
Nævus vascularis	9	Molluscum contagiosum	6
„ spilus	2	Fibroma molluscum	1
Verruca	20	Cicatrix	4
Callositas	10	Cheloid	5
Clavus	1	Cysts	23
Cornu	2	Scirrhus	5
Ichthyosis	31	Epithelioma	38
Scleroderma	1	Unclassified tumours	2
Elephantiasis Arabum	7		

3. *Hæmorrhages.*

Purpura simplex	6
„ tuberculosa	1
„ rheumatica	1

CLASSIFICATION OF 1000 CONSECUTIVE CASES OF SKIN DISEASE, MET WITH IN PRIVATE PRACTICE.

A.—FUNCTIONAL AFFECTIONS.

Pruritus	11	Atrophia cutis	1
Comedones	7	Alopecia	18
Hyperidrosis	1	Hirsuties	5
Ephidrosis cruenta	1	Fragilitas crinium	2
Ephelis	3	Canities	4

* Including strophulus, pityriasis, and roseola.
† Including its lichenous, pruriginous, and impetiginous forms.
‡ Including rupia non-syphilitica.
§ Including lichen urticatus.
‖ Including lepra.
¶ Independent of struma and syphilis.

B.—ORGANIC AFFECTIONS.

I. DISEASES DEFINED BY UNIFORM CAUSES.

1. *Parasitic Affections.*

Vegetable	Tinea favosa epidermidis		4
	Tinea tricophytina	Circinata* 10	36
		Tonsurans 20	
		Sycosis 6	
	Tinea versicolor		15
	Tinea decalvans		44
Animal	Scabies		44
	Phtheiriasis		7

2. *Syphilitic Affections.*

Secondary and tertiary accidents	51
Hereditary syphilis (infantile)	3
„ „ (non-infantile)	3

3. *Strumous Affections.*

Lupus	Vulgaris 22 / Erythematodes 3	25	Lichen scrofulosorum	2
			Strumous glands	9
Scrofuloderma	6		„ ulcers	2
			„ abscess	1

II. DISEASES NOT DEFINED BY UNIFORM CAUSES.

1. *Inflammations.*

Erythema†	99	Rosacea	21
„ pernio	2	Psoriasis	106
Eczema‡	348	Pemphigus	3
Impetigo contagiosa	1	Pityriasis rubra	1
Prurigo	2	Lichen ruber	1
Urticaria	5	Furunculus	10
Zona	1	Ulcers§	7
Acne vulgaris	54		

2. *New Formations.*

Varix (uncomplicated)	4	Elephantiasis Arabum	1
Nævus vascularis	2	„ Græcorum	1
„ spilus	1	Scirrhus	2
Verruca	4	Epithelioma	9
Ichthyosis	7	Multiple fatty tumours	1
Scleroderma	1		

3. *Hæmorrhages.*

Purpura rheumatica	1

The functional affections comprise all those diseases of the skin and its appendages in which there is no evidence of structural change. Of these there were 192 cases, 53 of which occurred amongst the private, and 139 amongst the hospital cases, and they include fifteen separate affections.

The first of these, pruritus, of which there were 50 illustrations, includes only those cases in which itching was the sole cutaneous symptom, and which may arise from a variety of causes, such as disorders of the digestive organs, of the urinary and genital organs, and of the nervous system; and the treatment consisted in the removal of the cause or causes, in addition, frequently, to the empirical treatment of the symptom itself. There can be little doubt that very frequently cases are erroneously classed under this head: thus the pruritus on careful investigation is often found to be dependent on the ravages of the itch insect or the louse, or upon recurrent outbreaks of nettle-rash, and should be classed under the respective heads of scabies, phtheiriasis, and urticaria. The only case specially worthy of mention under this head is that of a lady, aged about fifty, who consulted me on Jan. 10th, 1870, on account of intolerable irritation of the skin, which deprived her in great measure of sleep and made "her life a burden to her." The history which she gave of her case was that she went to visit a friend who was very deaf, and who used a speaking trumpet. She put her mouth close to the mouth-piece of the trumpet, and immediately experienced the irritation complained of, and from that time to this, a space of nearly two years, it has never left her. No trace of disease can be detected in her skin, and the pruritus cannot be very severe, as there are no marks of her nails to be seen. Her general health appears to be good, but she is in a very depressed state, and fears that she will never be better. It is quite evident that in this case the disease is mental rather than physical, and it is not improbable that it may end in insanity.

(*To be continued.*)

* Including the so-called eczema marginatum.
† Including strophulus, pityriasis, and roseola.
‡ Including its lichenous, pruriginous, and impetiginous forms.
§ Independent of struma and syphilis.

FRACTURE OF THE BASE OF THE SKULL.

By THOMAS MOORE, F.R.C.S. Exam.

A. E——, a healthy young man, aged twenty, was injured, on Sept. 14th, by a bucketful of sand falling upon his head down a well, a distance of eighty feet. He was brought up the well insensible, and whilst being carried to his home (about three miles off) vomited several times a considerable quantity of dark blood. At 10.45, an hour after the accident, I saw him. He was then quite insensible; skin cold and pale; pupils fully dilated and immovable; pulse 60, regular, small and weak. There was a contused wound, about half an inch in length, to the left of the occipital protuberance. At the bottom of this a longitudinal fracture could be felt; and above it was a slightly depressed piece of bone, as large as a shilling. There had been considerable hæmorrhage from the wound. Ordered water-dressing to wound and hot bottles to feet. 4 P.M.: Partly sensible, and could answer questions; pulse 60 and fuller; otherwise the same.

Sept. 15th.—Quite sensible; no more sickness; pupils act well; pulse 50, small and sharp; much pain at wound; extravasation of blood below left ear.

16th.—The same in all respects; bowels acted well after an aperient. He continued in the same condition, perfectly sensible, but with pulse 50 and sharp (the wound having healed by first intention), until the

18th, at 7 P.M.: Complains of singing in the ears; conjunctivæ suffused; tongue clean; pulse and other symptoms the same. To have an ice-bladder to shaven head; hot bottles to feet. To take an aperient at once, and ten grains of bromide of potassium every four hours.

19th.—7 A.M.: Had been delirious and sensible by turns during the night, and had four convulsions. Quite sensible now; singing in the ears continues; wound quite healed and healthy; pulse 45, and very sharp; eyes suffused; pupils acting. To have three leeches behind each ear, and to continue other treatment.—4 P.M.: Has had convulsions at intervals of half an hour during the day; otherwise the same. Bled him to twelve ounces. The insertion of the lancet brought on a violent epileptic convulsion, which continued for two minutes after blood had ceased to flow. After the bleeding the pulse became 60, fuller and soft. To continue ice.—10 P.M.: Fits not influenced by bleeding. Blister to the neck. Pulse 50, but soft. After this the fits gradually became more frequent, and he died in one on Sept. 20th, at 10 P.M., having been sensible in the intervals to the last.

21st.—Made a post-mortem examination, with the assistance of my partner Mr. Cross. Wound healed; great extravasation of blood on the left side of the head and neck under the skin. A zigzag fracture of the skull, extending from the right temporal through both posterior inferior angles of parietals and middle of occipital bones to the left temporal, through the mastoid and petrous portions of which was a gaping rent, so that the handle of a scapula could be easily passed into the pharynx. There was a *very slight* depression of inner table corresponding to external depression. Between the skull and dura mater was about two teaspoonfuls of firmly coagulated blood, extending from the wound to the temporal bone, and uniformly diffused over an area of two square inches. There was a hole as large as a crowquill in the middle of the left lateral sinus. Pia mater on left side much congested, and a thin layer of pus over the brain. Under the wound and below the depression was a rent in the brain an inch long, and of equal depth, with its surface covered with a layer of pus. The congestion of the surface of the brain was greatest here.

It is remarkable that this man should have suffered from such severe injuries to the brain, and that he should have remained sensible for so long a time, the sharp pulse of 50 being the only bad symptom. Moreover, there were no symptoms of pressure, although so much blood was extravasated, which must have been there from the first, as it was firmly coagulated, and could with difficulty be scraped from the dura mater. I discussed the advisability of raising the depressed portion of bone with Mr. Cross; but as there was no evidence of compression, we agreed that it would be unwise to interfere.

The vomiting of blood, although there was no sign of injury to nerves, led us to diagnose that the fracture felt through the wound extended to the base of the skull; and that fact, together with the slow and sharp pulse, induced us to give a very unfavourable prognosis from the first.

Petersfield, Hants, Oct. 1871.

THE

IDENTITY OF LIFE IN ITS EARLIEST MANIFESTATIONS.*

By ROBERT HAMILTON, F.R.C.S.,
SURGEON TO THE SOUTHERN HOSPITAL;
VICE-PRESIDENT OF THE MEDICAL SOCIETY, LIVERPOOL.

We have had so much attention given of late to the building-up of life, either from a pre-existing germ or *de novo*, that it will be refreshing, if nothing more, to view the point in dispute—that of the beginnings of life—from a different aspect altogether; and, assuming that in the breaking-up of organic matter around us every separate particle retains a life of its own, inquire what becomes of these atoms of vitality. The subject is so vast, and has engaged the attention of late years of some of the most eminent men in the world of science, that to approach it at all requires some hardihood on my part.

The object of this paper is only tentative—a proposal, as the result of certain experiments, to look for the origin of the earliest forms of life, as a sequence of the disintegration of a compound life, in a somewhat different manner than has hitherto been done; encouraged to do so by the remarkable fact, which it is intended to illustrate to-night by the experiments which will be shown, that the decomposition of organic matter, however various in its kind—animals or vegetables of the highest and of the lowest organisation,—shows in the first stages of that decomposition similar forms (under the microscope) of rudimentary life.

When looking at life breaking-up as a whole, ceaselessly disintegrating as we see it doing around us, we cannot forbear surmising that each loosened atom retains a life of its own—a molecular life distinct and separable from the life which occupied and regulated the organism as a whole; which life, when it was extinguished by disease or decay, did but set free the molecular life to start, as it were, on an independent course. In the first few steps of that course the molecular life assumes identical shapes from whatever source derived. For instance, take a plant of the highest or of the simplest organisation, as long as its parts are in accord the one with the other, it flourishes—it lives as a whole; but a time comes in its history when its existence as a whole ceases, and it disintegrates, and it is whilst disintegrating that the life of each cell, hitherto interdependent one upon another, and all, as it were, upon a central whole, is set free and becomes independent. That this independence is, in the majority of cells, only momentary, is not a reason for doubting it ever having existed, because numerous agencies are at work around it to destroy its vitality instantly.

Again, taking an animal, whether high in the scale of being or of lowest structure, we shall find, when its existence terminates, that, in breaking up, every portion of the tissue of which it is composed, every particle, in fact, which goes to make up that tissue, has a life of its own; an ephemeral one no doubt, and one soon blotted out in the majority of instances, but life with a certain amount of inherent power, inasmuch as it is capable of growing, if surrounding conditions are favourable, and of passing into forms yet higher in the scale than itself; and these latter again, if not destroyed, will advance another step in complicity of organisation. The number that do so in each successive grade becomes less and less; so that from the countless myriads of the first forms of life which are seen in the field of the microscope at first, we come in a short time to find only a few survive, and still fewer have passed into the succeeding stages of being, and none as yet have been

* The substance of this paper formed part of the Introductory Address delivered at the Meeting of the Microscopical Section of the Liverpool Medical Society.

traced beyond a few stages of development. The surrounding conditions required by each higher life are no doubt special to each species; and as they are not present, ministering to it, it perishes.

The earliest forms of life apparent under the microscope are the minute dot-like spots, the monads; and next, if not coeval with them, the bacteria—the microzymes of Dr. Burdon Sanderson. These may be seen in countless numbers in a drop of infusion either of fresh meat or of fresh grass, when the infusion has stood about forty-eight hours.

What comes next in the order of development it is as yet difficult to divine. We cannot tell when an inherent power possessed by each molecule—a power derived from the mass of which it once formed a part—comes into operation as a law of its being; or, again, if there is no such law, how the evolution of its vitality, or, in other words, the form which its next higher life will assume, will depend upon the immediately surrounding circumstances, for there can be no doubt that the successive steps into this higher life are immensely influenced by these.

The first series of experiments was begun on Sept. 3rd, 1871, for the purpose of testing the relative power of certain substances in preventing putrefactive changes in either animal or vegetable matter—a subject which, about the same time, seems to have engaged the attention of Dr. Dougal of Glasgow, who, in an excellent paper read before the British Association at Edinburgh, and since published, has detailed the results of his experiments with a very large number of substances which prevent the generation of animalculæ. My investigations were more limited on that point, but, as far as they went, bore out the conclusions of Dr. Dougal. The later experiments to be now described have had a different object in view. The following is a copy of the notes taken at the time:—

Sept. 3rd, 1871 (10 A.M.).—No. 1: Placed a piece of mutton, thirty-six hours killed, in a wineglass of fresh well-water, uncovered, in a large room. No. 2: Another glass of the same, to which was added ten drops of carbolic acid. No. 3: A small portion of fresh clover in a wineglass of well-water, uncovered. No. 4: Another glass of the same, to which ten drops of carbolic acid were added.

Sept. 5th (10 A.M.).—Examined a drop from each of the four glasses. No. 1 smelt offensive, a pellicle was floating on its surface, and a drop was found teeming with active life. No. 2 had no smell beyond that of the carbolic acid, no pellicle, and nothing could be discerned in a drop examined under the microscope. No. 3 had no smell, but was turbid, and a drop presented precisely the same appearance as a drop from No. 1. No. 4 presented the same negative results as No. 2.

Sept. 6th.—No. 1 smells more offensive, is more turbid, has a denser scum, and one drop is seen to swarm with monads and bacteria. No. 2: Free from smell, and nothing discernible under the microscope. No. 3: Beginning to smell disagreeable, and a drop presents the same appearance as yesterday. No. 4: The smell of carbolic acid discernible, but no other; drop clear—nothing to be seen.

Sept. 7th.—No. 1: Similar to yesterday. No. 2: Similar to yesterday. No. 3: Smells more offensive; besides monads and bacteria, there are now to be seen larger animalculæ, oval in shape, and exceeding by twenty or thirty times the size of the monads, and very active. No. 4: Similar to yesterday.

Sept. 11th.—No. 1 smells most offensive; a dense scum on the top, a drop of which does not show any movement. It is only the edge of the drop that can be illuminated sufficiently to define, and even then the small bodies, though of the same shape as monads and bacteria, are all immovable and appear lifeless. No. 2 begins to smell, and a drop presents the same appearance as No. 1 did on Sept. 5th. This would seem to show that the carbolic acid introduced into this infusion had either evaporated or in some way had disappeared, as putrefactive changes had begun. No. 3 presents no large infusoria, but swarms with the same as it did on Sept. 5th. No. 4 perfectly clear and unchanged.

In conducting these experiments I was struck with the sameness in appearance of the life which teemed in the pellicle floating on the surface of the infusion, whether animal or vegetable, where no preservative substance had been used. In other words, a piece of meat and a little fresh clover-grass, each placed in a wineglass of water, did in forty-eight hours evolve the same forms of life, monads and bacteria. Though each succeeding day somewhat larger forms came into view, evolved in the onward progress of cell-life, yet there was no great difference in the new forms seen moving about in both. Of course there was a limit to this, and after several days there were to be seen large and very active circular bodies darting about in the vegetable pellicle, not to be found in the animal one. Disregarding the influences of light, heat, and air, because all the infusions were placed under precisely the same conditions, the experiments were repeated by extending the number of animal and vegetable substances used, and included fresh leaves of trees, earth-worms, snails, old hay, fish, each in separate glasses of water. In two to three days, when a pellicle had risen to the surface, a drop was examined and found to present a similar appearance in every case—a teeming mass of monads and bacteria. These experiments were conducted in the north of Ireland, in the neighbourhood of Portrush.

A fresh series was begun in Liverpool on October 3rd. In one set in separate glass jars were placed a piece of fresh mushroom, some fresh grass, a mussel taken out of its shell, a cockle ditto, a piece of calf's liver, and some hay. Each jar was half filled with filtered water. In a second set portions of the same substances were placed in glass jars, and one or other of the following preservative substances in solution added: carbolic acid, sulphurous acid, sulphate of copper, petroleum refined, chromic acid, and hydrocyanic acid. In a third set, portions of the same substances were put in small stone jars and filtered water added; they were then covered each with a book and placed in a perfectly dark closet, so that light and air were pretty well excluded. The other two sets were placed uncovered on a window-sill having a south-east aspect.

(To be concluded.)

A Mirror
OF THE PRACTICE OF
MEDICINE AND SURGERY
IN THE
HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

[CLINIQUE FOR SKIN DISEASES.]

REMARKS ON THE TREATMENT OF ITCH.

(By Dr. TILBURY FOX.)

"We talk of papular, vesicular, and pustular scabies; whereas the scabies itself is only the acarus in its burrow—the cuniculus with the vesicle at one end (the result of effusion set up by the entrance of the acarus), and the embedded acarus, showing itself as a white opaque speck, at the other end. All else is merely secondary to the irritation set up and the scratching practised for its relief. The papules are erected and congested follicles, the pustules suppurating follicles; and these papules and pustules occur as a part of many other diseases in which the skin is subjected to severe irritation. Kill the acari, and the secondary eruption disappears of course. But what do we do usually? We treat not only the essential disease, the real scabies—namely, the acarian furrow and its embedded ova and acari,—but also the secondary results in the same manner, applying to them the same parasiticide. Yet we should treat the former by parasiticides and the latter by soothing remedies; the more so as we know that the acari are generally to be found in certain localities. In recent cases in adults the localisation of the acari to the interdigits and the region of the wrists is complete; and it is easy to do harm by intensifying the secondary irritation, though the original cause (the acari) may be destroyed by our remedies. Therefore I say, in recent scabies use the parasiticides, sulphur or storax, petroleum, benzine, or the like, to the wrists and

interdigits, and simple unguents to other parts. In chronic scabies the case is different, for here the acari may be more or less ubiquitous as regards the body. But even here a distinction is to be made: the parasiticide should be applied to the small and fine rash, and not to the ecthymatous pustules.

"Error number one, then, in the treatment of scabies, which is often made, is the application of parasiticides to 'the wrong place.' Error number two is the use of too powerful parasiticides. We need only use half a drachm of sulphur to the ounce of lard; there is no occasion for a stronger ointment nor for hellebore ointment. Gentle friction for a long time with a milder preparation is all that is required. Error number three is the use of parasiticides for too long a time. The use of a parasiticide for two or three days should be followed by a good washing and the discontinuance of the remedies for a night. If the patient be not troubled with itching during the night he may conclude that the acari are killed, and all we need do is to guard against the hatching out of fresh acari by the light application of our parasiticide once a day to any 'pimply' places for a few days longer, taking care that the foul clothes are well heated or scalded. It often happens that the remedy used to destroy the acari is continuously used until it sets up on its own account severe irritation, which is mistaken for an increase or spread of the scabies. 'Not too strong and not too long' is my rule for the use of remedies in scabies. The occurrence of red, rough, erythematous patches is a sign that the remedy itself is creating a disease.

"I do not like sulphur baths. Don't use them in recent cases; you need only treat the hand with parasiticides. In our new baths we shall cure our patients at a sitting, and disinfect their clothes at the same time. But in private practice you must follow the old-fashioned plan. I prefer, for ordinary use, an ointment made of half a drachm of sulphur, five grains of white precipitate, ten drops of oil of chamomile, five drops of creasote, to one ounce of lard. For chronic scabies sulphuret of potassium baths or an iodide of potassium lotion, one drachm to six ounces of water, are good; but I like the first-named remedy as well as any. Should we disinfect the clothes? Yes, by strong heat. I cannot *prove* to you that the clothes convey infection; but I believe it better to be on the safe side."

KING'S COLLEGE HOSPITAL.

OPERATIONS ON THE 4TH INST.

(By Sir WM. FERGUSSON.)

Removal of a Fibrous Tumour from the Roof of the Mouth.—The patient was a woman of about twenty years of age. From the surface of the hard palate, to the left of the median line, there sprang a tumour of the size of a large filbert, somewhat lobulated, and covered with healthy mucous membrane. As the roof of the mouth was rather low, this tumour sufficed to fill the entire cavity of the closed mouth. An incision having been made in the mucous membrane, the tumour was readily turned out by means of an elevator, and proved, as had been suspected, to be of the fibrous variety.

Operation for Hare-lip, with Removal of the Intermaxillary Bone.—One operation had already been performed on this patient, who was about one year of age; but no union had been effected. This result Sir Wm. Fergusson attributed to the omission to remove a projecting intermaxillary bone. He observed that the operation could not be said to have been really completed without the removal of the projection in all cases where it exists; because, as the teeth which it evolves never grow well, no good reason can be adduced for preserving it. The cleft was in the right side, and extended to the hard and soft palates.

Sir W. Fergusson operated on two other patients, adults, for cleft in the hard and soft palates. He directed his attention to the latter only, reserving the anterior portions of the fissure for a future occasion.

(By Mr. HENRY SMITH.)

Operation for Fistula in Ano.—Mr. Henry Smith operated on a young woman twenty-three years old, for severe fistula in ano. About two inches within the rectum was a firm stricture, through which the finger could only be passed with difficulty. There were several complete fistulous passages. One of these, of which the external orifice was situated at least three inches from the anus, communicated with the bowel so far beyond the stricture that it was only with the greatest difficulty that the finger could be made to reach the end of a probe passed through it, and the operator seemed to have misgivings as to the amount of hæmorrhage which would follow the division of the extensive triangle included between the finger, the probe, and the skin of the buttock. The bleeding which followed the use of the knife was not, however, alarming, and, the stricture having been freely divided and the opened sinuses plugged with oiled lint, the patient was removed to the ward.

GREAT NORTHERN HOSPITAL.

PTOSIS, MYDRIASIS, AND HYPERÆMIA, WITH ANÆSTHESIA OF THE LEFT SIDE OF THE FACE, IN A SYPHILITIC PATIENT.

(Under the care of Mr. SPENCER WATSON.)

ON the occasion of a recent visit to the above hospital, we had an opportunity of observing some peculiar nerve-symptoms in an out-patient under the care of Mr. Spencer Watson.

She is twenty-two years of age, and since April last has been under treatment for severe syphilitic periostitis of the tibia, which is only now yielding to large doses of iodide of potassium and cod-liver oil, varied, as occasion has seemed to demand, with tonic treatment. The pain is even now occasionally so severe as to require the exhibition, three times a day, of grain doses of opium. The cachexia has been extreme, and in the early part of her attendance led to a series of abscesses in the cervical lymphatic glands of the left side, of which the red and deeply puckered cicatrices now mark the neck. One of these is situated over the anterior edge of the sterno-mastoid, immediately below the angle of the jaw; and another lies in the anterior triangle, just in front of that muscle.

About four months ago she presented herself with the left side of the face affected in the following way: There was partial ptosis, and the pupil was widely dilated; the cheek wore a deep and permanent blush, and there was complete anæsthesia of the left side of the face and nose. The numbness first declared itself in the forehead, and gradually spread to the lower part of the face; and sensation is now returning in the order in which it faded, while the other symptoms are also abating. When we saw the patient the ptosis was scarcely perceptible, the mydriasis and blush were becoming less observable, and sensation was restored to the skin covering the lower jaw.

WEST LONDON HOSPITAL.

A CASE OF RECURRENT STONE IN THE BLADDER; LITHOTRITY; CURE.

(Under the care of Mr. TEEVAN.)

THE features of this case which Mr. Teevan indicated as being of interest were—(1) the occurrence of calculus after a long interval of perfect immunity, (2) the fact of the patient's brother having also been the subject of calculus, and (3) the patient's testimony regarding the sensation produced when his bladder was washed out at the hospital where he had been before under treatment; he described it as being "worse than all the crushings put together." Washing out the bladder, Mr. Teevan said, is not looked upon as a serious manipulation, but is, nevertheless, a far more painful proceeding than lithotrity, and should never be resorted to unless imperatively needed.

James C——, a gardener, aged fifty-four, strong and healthy-looking, stated that two years ago he was an inmate of one of the metropolitan hospitals for a stone in the bladder, of which he was completely cured by lithotrity in five sittings. He then resumed work, and remained perfectly well till about six weeks ago, when he began to suffer much irritation at the end of the penis, with frequent desire to urinate, and noticed that he occasionally passed a little blood. He was unable to ride on account of the pain

he suffered from the jolting of the cart. He was much annoyed by frequent calls to make water, and, when in bed, could only pass his urine whilst lying on his side. These symptoms, he said, were similar to those he had suffered before. He added that his brother had been cut for stone. On sounding the patient, Mr. Teevan detected a stone of about the size of a walnut, lying behind an enlarged prostate. Mr. Teevan operated at 3 P.M. on the 19th of August with the lithotrite made after his own design by Messrs. Mayer and Meltzer, again on the 23rd and Sept. 2nd and 6th. A few days after the last date the patient felt so well that he imprudently took a long walk, which was followed by so much local and constitutional irritation that he could not be again operated on before the 20th of September. A week after that date he resumed work again. The stone consisted of lithic acid. On October 28th the patient returned to the hospital, saying that he had not yet got quite rid of all annoyance at the end of the penis. A small fragment was found, and crushed with the lithotrite. From that time to the present the patient has been free from all annoyance.

PROVINCIAL HOSPITAL REPORTS.

BRISTOL GENERAL HOSPITAL.

(Cases under the care of Mr. LANSDOWNE.)

IN reference to supposed cases of hydatid cyst in the prostate gland, Sir Henry Thompson, in Holmes's System of Surgery, calls in question the fact of any such instance having been well ascertained. He surmises that they have been cases in which prostatic enlargement was closely simulated, though that gland was not affected otherwise than by pressure. In the following instance no evidence of hydatid formation could be traced, but it tends to confirm Sir Henry Thompson's opinion, as Mr. Lansdowne entertains no doubt that the prostate was not involved. He observes that, apart from the evidence gained by examination, it is *a priori* very improbable that the tough capsule of that gland would be distended to so great an extent as is here described.

CASE 1. *Cyst between the Bladder and the Rectum causing Retention of Urine; Examination of the Contents; Recovery.*—G. W——, aged twenty-eight, was admitted for retention of urine, the cause of which could not be ascertained until the rectum was examined. In the situation of the prostate there was then found a large mass, of a bulging, conical shape, yielding a tense, elastic, and fluctuating feel. The finger could not be made to reach its upper limit, but as much of it as could be felt was larger than a closed fist, and in shape exactly corresponded to the prostate itself.

The introduction of a catheter was accomplished with considerable difficulty, arising chiefly from the existence of a large false passage. About five pints of urine were drawn off, and a second examination by the rectum discovered the swelling to be *in statû quo*. The man stated that he had had more or less constipation and difficulty of micturition and occasional retention for the last two months. On the day after admission it was noticed that the urine was thick and smoky from the presence of pus and blood. The use of the catheter was required night and morning. On the fourth day, the bowels having been previously acted on by medicine, the swelling was punctured from the rectum with a fine trocar and canula, and twenty-three ounces of a colourless, limpid fluid were drawn off. It was of a specific gravity of 1006, and contained a very small quantity of albumen. A number of squamous epithelium cells were the only formed products to be seen under the microscope; there was no trace of echinococci. A body having the shape, size, and situation of the prostate, obscured by wrinkled folds of mucous membrane, could still be felt. The bladder was evacuated naturally shortly after the operation.

In nineteen days the cyst had become refilled, and again gave rise to retention of urine, as well as to an aching pain in the sacral region—probably due to pressure on the sacral nerves—which extended down the thighs. He had a slight rigor; his pulse was 100, and his temperature 100·5°. The cyst was, in consequence, again tapped, and about a pint of most fetid flaky pus, which escaped with intermittent jets, was on this occasion drawn off. Some diluted Condy's fluid was injected into the cyst through the canula. In nine days more it had again refilled, and, at the most depending part, gave indication of a disposition to point. He had a hectic, anxious appearance, and a temperature above the normal standard. While at stool in the evening the cyst gave way, and emitted, according to the patient's statement, about a pint of most offensive pus. On the following day the pulse and temperature were normal. During the succeeding eight days a discharge took place from the rectum on each occasion of a motion being passed. The day after the cessation of this discharge, on the patient attempting to pass water, a quantity of fetid pus was discharged through the urethra; at first it came unmixed and in advance of the stream of urine, then mixed with it. It was presumed that a channel of communication had been formed between the cyst and the prostatic portion of the urethra. For more than a week longer the patient continued to discharge matter from the urethra, but his health improved so much that he soon was made an out-patient. To the last a bulky swelling, much smaller and harder than that at first felt, continued to obscure the prostate.

CASE 2. *Excision of the Superior Maxilla for Epithelioma of the Cheek and Hard Palate.*—Epitheliomatous growths had been removed from the patient's cheek on two separate previous occasions, twelve and eight months back respectively. The third recurrence was estimated to have been in existence about sixteen days before the operation in question was undertaken. In the middle of the cheek, and in the cicatrix of the former incisions, was an indurated swelling of about the size of a filbert, surmounted by a small sore, which presented the usual epitheliomatous characters. The greater part of the left hard palate was also involved; there was no apparent affection of the adjacent glands. The patient's general health was very good. For the operation, an incision carried from the external angular process of the frontal bone and round the tumour, skirting widely the diseased tissues, and prolonged to the angle of the mouth, was found amply sufficient. As the patient's breathing gave rise to serious apprehension towards the close of the operation, the floor of the orbit was removed for the sake of expedition; the whole of the left soft palate was also removed. The hæmorrhage was readily controlled by torsion. The wound was brought together by means of carbolised gut sutures and two hare-lip pins at the points of greatest tension. The patient was at first troubled with monocular diplopia, probably from loss of the attachment of the inferior oblique muscle. He made an excellent recovery.

(Under the care of Mr. ATCHLEY.)

Extravasation of Urine in a Child following Rupture of the Urethra from a blow.—The patient was six years old, and, two days before admission, had been observed to suffer from irritation and slight œdema about the prepuce. On admission the scrotum, penis, and perineum were of a bright-red colour, and very œdematous. A clear serous fluid exuded on puncture. The boy had passed no water for twelve hours. A catheter was passed without difficulty, but, at the membranous part of the urethra, a slight roughness was felt. There was no blood in the urine. Free incisions were made into the affected parts, and poultices were applied. On the second day the child seemed better, and passed water naturally. On the third day retention again occurred; a sensation of grating was felt as the catheter passed the neck of the bladder. In the evening he passed water in great agony. On the fourth day the integuments of the penis were found to be gangrenous; the incisions were sloughing, and a red and very tender swelling occupied the right pubic region. Further free incisions were made, and a charcoal poultice was applied. Quinine and opium were internally administered. Some urine was withdrawn through an elastic catheter. A few hours later it was decided to make a free opening into the bladder through the perineum. On the finger being introduced into the rectum, the elastic catheter, which had been tied in, could be felt immediately above the mucous membrane, moving freely in a large pouch. A straight bistoury was passed, in the middle line, into the catheter, and onwards into the bladder. Very trifling hæmorrhage occurred, and a large quantity of urine was liberated. The operation gave much relief. On the following day urine passed through the urethra, and through

an irregular opening close to the perineum, but chiefly by the perineal opening. Two days later, on a slough being removed from one of the incisions in the pubes, an opening was exposed from which urine immediately welled up. There were thus four separate orifices of discharge. Rather more than three weeks later the child was in good health, and all the adventitious openings, with the exception of that near the perineum, which was rapidly contracting, had completely closed. Some time after he had been in the hospital it was discovered that, on the day on which he had first been brought to the hospital, he had fallen astride a crutch.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

MONDAY, OCTOBER 30TH, 1871.

DR. ANDREW CLARK, PRESIDENT, IN THE CHAIR.

MR. VICTOR DE MÉRIC narrated a case of Fibroid Phthisis depending on Traumatism. The patient, aged forty-five, was forcibly raised from the ground by an assailant, who attempted to throw him into a wine-vat. In this act some of the lower ribs on the right side suffered fracture near their angles. In a few days the symptoms became alarming: hurried breathing, severe pain in the left side of the chest, restlessness, anxious countenance, and abundant expectoration. Shortly afterwards the patient was in a typhoid state, the whole of the left side of the chest being dull on percussion, and offering no respiratory sound whatever. It was concluded that the left pleura had been injured either from pressure or shock, that effusion had taken place, and that the case was one of acute pleuro-pneumonia. Signs of phthisis ultimately showed themselves, and the patient died. At the post-mortem examination the evidences of old-standing pleurisy, with effusion and also recent phthisis, were found. It was believed that the pleuro-pneumonia did the mischief, and originated the phthisis.

Dr. DOUGLAS POWELL was unable to understand why this was called a case of phthisis. He would consider it, from an examination of the specimen and the clinical history, a case of pneumonia in the grey stage.

The PRESIDENT remarked that it was not a case of what he called fibroid phthisis, which would present ulceration and suppuration of a more or less circumscribed non-malignant deposit in the lung. If there was no cavity, there was no phthisis. The specimen was an excellent example of the hard form of grey pneumonic consolidation. Some bronchi becoming blocked by exudation, fluid collected in them and gave rise to gurgling.

MR. JOHN PENNEFATHER showed a large Gelatinous Polypus extracted from the ear by means of a spring forceps, which he prefers as a more simple and effectual method of removing these growths. He then read a paper on the Sense of Hearing, and contended that writers on this subject were in error in supposing that the bones of the head or the air contained in the tympanum had any power of conduction unless the sonorous body was in actual contact with the cranium. The structure of the internal ear was explained and demonstrated both by microscopical preparations and plates.

A spirited discussion ensued, in which Dr. Routh, Dr. Symes Thompson, and Dr. Dalby took part.

MR. TEEVAN exhibited (1) a new kind of Lithotrite, with heavy square handle and a vertical slide instead of a button. The weight of the handle enabled the lithotrite to glide more easily into the bladder, whilst its squareness united great firmness, when held, with the greatest delicacy of manipulation. The closure of the slide by pressure was more simple than pushing a button to and fro. (2) A syringe for deep urethral injection, made of glass, capable of holding a few drops, attached to an elastic nozzle five inches long, surmounted by a ball. A stiff nozzle was very undesirable for deep injection. The ball permitted accuracy of application, for measurement could not always be relied on, as the penile urethra was continually altering its length. (3) A syringe for patients to use either for gonorrhœa or gleet. It consisted of a small elastic ball attached to a nozzle of bone three and a half inches long. It was durable and inexpensive.

MR. TEEVAN also exhibited the bougie olivaire à ventre, the bougie à trois baules, the bougie olivaire en balein, and M. Mercier's sondes coudées et bicoudées.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCT. 27TH, 1871.

DR. W. W. GULL, F.R.S., PRESIDENT, IN THE CHAIR.

MR. HULKE exhibited a blacksmith, from whom, in August, 1870, he had removed in the Middlesex Hospital, by excision and cauterisation, a very large Rodent Cancer of the left side of the face. It had eaten away the whole lower eyelid, and part of the upper one; it had also invaded the orbit and destroyed the eyeball, and opened the frontal sinus and nasal passages. The patient returned in August last with two small growths of the size of a threepenny-piece. These were destroyed with zinc paste, and the whole surface now seemed perfectly healthy. There was now a large hollow, lined with healthy mucous membrane, showing the lower and middle turbinated bones, the openings into the frontal sinuses and nasal passages, and the antrum. This chasm could be hidden by a mask. Mr. Hulke said that the danger of operating in these advanced stages was over-estimated, and that with care the actual cautery and a chloride-of-zinc paste could be safely used, even to the roof of the orbit.

MR. G. LAWSON exhibited a patient from the Middlesex Hospital on whom he had operated successfully for a Rodent Cancerous Ulceration, involving the upper eyelid and extending into the orbit and on to the side of the nose. On account of the extent of the disease the eye was first excised, and then the whole of the diseased structure was removed with a scalpel. The bleeding having been arrested by the actual cautery, the chloride-of-zinc paste, spread on pieces of lint, was freely applied to the cut surface; a layer of cotton-wool was then laid over the parts, and the whole was kept *in situ* by a turn of a bandage round the head. The patient suffered comparatively little from the operation. The pain which she had was relieved by a subcutaneous injection of morphia. Large sloughs soon came away, and portions of the bony walls of the orbit exfoliated, and ultimately the granulating surface of the wound cicatrised. There was now a large gap, showing the upper portion of the nasal cavity and some of the ethmoidal and frontal cells; but the parts were all healthy and cicatrised, and there was reason to hope there would be no recurrence of the cancerous ulceration.

The PRESIDENT suggested that the faces of the patients should be photographed.

Dr. MOXON asked what was the structure of the indurated edge of the ulcer?

MR. HULKE referred to specimens shown by him last winter at the Pathological Society, saying that it agreed with them, being essentially a cell-growth without a true intercellular substance, the cell masses lying in the interstices of a stroma, and pushing out beads into the surrounding parts.

Dr. MOXON also asked for the clinical and anatomical grounds for classing the ulcer with cancer.

MR. HULKE replied that the clinical definition of cancer had different scopes; that, according to Virchow, cancer, anatomically considered, was a limited group of tumours, having essentially a structure similar to the edge of this ulcer; that in these ulcers cell-tissue was found graduating from a tissue, like the rete mucosum, of small, soft, round cells to the flat scales of typical epithelioma. He observed that, clinically speaking, it was customary to regard all tumours as cancers which infiltrate themselves at their advancing borders into the surrounding normal tissues, invading every tissue indifferently. In attacking all tissues alike, the local manifestations of rodent cancer are the same as those of other cancers, while in this case the absence of mischief in the glands, &c., showed only a minor degree of malignancy, and afforded no proof that the disease was non-malignant.

A conversational discussion ensued as to the composition of escharotic pastes, in which Mr. Hulke, Mr. De Morgan,

Dr. Sedgwick, and Mr. Berkeley Hill took part, and united evidence went to prove that the pastes in common use were very manageable, and that the escharotic effects did not spread beyond the parts intended to be influenced.

Mr. DE MORGAN also remarked that the age of the patient seemed to have little influence over the success of the operation, and cited the case of a patient eighty-four years of age, in whom an entirely successful operation had recently been performed.

Dr. C. THEODORE WILLIAMS related three cases of Phthisis, in which contraction and rapid obliteration of cavities had taken place. The patients were two females and one male, and their respective ages were fifteen, fifty-three, and twenty-seven. They had symptoms of phthisis for periods varying from six to twelve months; the disease being for the most part limited to the upper lobe of one lung, where unequivocal signs of a cavity had appeared. The first was a case of caseous pneumonia, where the cavity became obliterated in two months, and the patient has since remained free from cough for more than one year. In the second case, which, from the great prostration, excessive night-sweats, and aphthous state of the mouth, was regarded as unfavourable, the disease followed pleuro-pneumonia, and closure of the cavity was complete in three months. In the third case the patient had fistula, followed by scrofulous pneumonia; and a large tinkling cavity, involving the whole upper lobe of the right lung, formed, which became obliterated in two months, cavernous sounds being no longer detected. All three patients were free from family predisposition. They took cod-liver oil, with tonics, and enjoyed a liberal diet. Dr. Williams remarked that contraction had taken place with unusual rapidity in these cases; and the remarkable feature was, that it gave rise to little or no displacement of the neighbouring organs, and to no marked collapse of the chest. He therefore concluded that the vacuum created by the shrinking of the cavities must have been supplied by an expansion of the lung-tissue round the cicatrix. The obliteration in two months of a cavity sufficiently large to give tinkling sounds was an exceedingly rare occurrence.

Dr. HABERSHON opined that the diagnosis of a cavity in the lungs was by no means an easy matter, and quoted Dr. Addison in proof of the assertion that no ordinary physical signs can determine the existence of a cavity satisfactorily. He was sure that vomicæ were much more rare than is generally supposed.

Dr. C. J. B. WILLIAMS made some general comments on the cases adduced, and said that in the third case quoted amphoric resonance or metallic tinkling existed in a very marked degree, and that these sounds can only be produced by a cavity; that cavernous sounds were quite distinct from those of bronchophony, and that the latter were much more diffused.

Dr. MOXON criticised the description and the mode in which Dr. C. T. Williams arrived at his diagnosis, and asked for a distinct explanation of the so-called "cavernous croak." He believed also that a single examination of the chest was not sufficient to diagnose the existence of a cavity, because, among other reasons, the tubes may be occupied by mucus for a considerable time. He also doubted if displacement of the heart could have occurred under the circumstances described by Dr. Williams.

Dr. DOUGLAS POWELL had no doubt as to the existence of cavities in these cases, and he had often seen marked enlargement of the opposite lung as a consequence; and in post-mortem examinations had frequently found cavities in the lungs empty and flattened, though no adhesion of the walls had occurred.

The PRESIDENT commented upon the great importance of being able to diagnose accurately the existence of a cavity, and gave examples of errors committed by himself in this particular.

Dr. C. J. B. WILLIAMS, in reiterating his firm belief that cavities can be easily and accurately diagnosed, remarked that intensity of sound was deceptive, that vocal resonance in the trachea was not a trustworthy symptom, that loudness of voice did not of itself constitute pectoriloquy, and that the general history of the case should always be considered. He believed the "cavernous croak" to be caused by the sudden entrance of air into a hollow.

Dr. C. T. WILLIAMS replied briefly, and the Society adjourned.

Reviews and Notices of Books.

Neuralgia and the Diseases that resemble it. By FRANCIS E. ANSTIE, M.D. Lond., Fellow of the Royal College of Physicians, &c. London and New York: Macmillan and Co. 1871.

RATHER more than three years ago Dr. Anstie contributed to Reynolds's "System of Medicine" an article on "Neuralgia," in which, for the first time, at least in this country, a distinct and independent position was claimed for that disease. Previously neuralgia, definite enough to the patient, had a somewhat vague significance for the profession, by the majority of whom it was regarded as a mere offshoot of the gouty or rheumatic diathesis, or even as a casual symptom of other and incongruous diseases. Its diagnosis was difficult from its many counterfeits; and patients continued to be treated for neuralgia when myalgia, or spinal irritation, or hypochondriasis, or locomotor ataxy, or some one of at least seven other disorders, was the real cause of suffering, and should have been the real object of the physician's care. To these so-called spurious neuralgias Dr. Anstie has, accordingly, given a separate classification and a distinctive character; and the part of the present volume in which this is done is a valuable contribution to scientific medicine.

"Pain" in general is the subject of the opening chapter, and the conclusions regarding it to which Dr. Anstie comes are that it involves a true lowering of function, and not, as hitherto maintained, a genuine hyperæsthesia; that it springs from a perturbation of nerve-force, due to dynamic disturbance either within or without the nervous system; and, finally, that, in proportion to the physical imperfection of the nervous tissue is the susceptibility to this perturbation determined, until the imperfection goes so far as to arrest all nervous communications, and becomes, in fact, paralysis. The ground being thus cleared, Dr. Anstie enters upon a very careful clinical history of neuralgia, which he defines as a disease of the nervous system manifesting itself by pains, which, in the great majority of cases are unilateral, and appear to follow accurately the course of particular nerves, and ramify sometimes into a few, sometimes into all the terminal branches of these nerves. This chapter, however, with all its merits of method, acuteness, and inductive force, will impress the reader less powerfully than the two succeeding ones, on the complications of neuralgia, and on the pathology and etiology of the disease. Under the wholesome stimulus of Dr. Eulenburg's criticisms of the original article in Reynolds's "System of Medicine" Dr. Anstie has subjected the positions therein propounded to a searching and exhaustive revision, and has reinforced them by a kind of investigation perhaps never before systematically carried out with regard to neuralgia.

That the neuralgic tendency is hereditary Dr. Anstie demonstrates by a number of striking cases, in which the parent of the sufferer had also been affected by the disease, and also by a copious citation of instances in which the family history of the patient showed that, among the members of two or more generations, while one or two members had been actually neuralgic, other members had suffered from other serious neuroses, such as insanity, epilepsy, paralysis, chorea, and the proclivity to uncontrollable abuse of alcohol; and in many cases that this neurotic disposition was complicated with a tendency to phthisis. Next to the influence of neurotic inheritance, Dr. Anstie shows, and, as we think, on substantial evidence, that there is no such frequently powerful factor in the construction of the neuralgic habit as mental warp of a

certain kind, the product of an unwise education. Every parent, especially among the professional or upper middle class, should be made cognisant, through his medical adviser, of the really pernicious influence exerted on the nervous system by well-meant efforts to train the emotions and aspirations of the young to a high, especially to a high religious, ideal.

"In modern society," says Dr. Anstie, "there are two principal methods which are popularly employed for this purpose. I shall describe them by two epithets which are selected with no offensive intention, as the Conventual and Puritan methods of spiritual training. By the former is meant that kind of education which deliberately dwarfs the nervous energy, with the hope of preserving the mind from the contamination of unbelief and of sinful passion. It is a system which is not peculiar to the Roman Church, nor even to the Christian religion, and it need the less detain our attention, as its effects, so far as they are evil, are mainly seen in general nervous and mental enfeeblement, rather than in the outbreak of explosive nervous disorders, such as convulsions, insanity, or neuralgia. There are, doubtless, exceptions to the rule; but that is the rule. It is far otherwise with the spiritual education which is here called Puritan, but which is confined to no party in the church. This is a system which seeks to purify and exalt the mind, not by enforcing obedience to a series of spiritual rules for which another mind is responsible, but by compelling it to a perpetual introspection, directed to the object of discovering whether it comes up to a self-erected spiritual standard. The reader will understand that I have not the remotest intention to depreciate either a true and manly self-restraint in obedience to the direction of 'pastors and masters,' or an honest watchfulness over one's own conduct and thoughts. But the lessons which our psychologists are rapidly learning, as to the evil effects on the brain of an education that promotes *self-consciousness*, are sorely needed to be applied to the pathology of nervous diseases generally, and of neuralgia among the rest. Common sense and common humanity, when united with the physician's knowledge, cry out against the system under which religious parents and teachers subject the feeble and highly mobile nervous systems of the young to the tremendous strain of spiritual self-questioning upon the most momentous topics. More especially is such a practice to be condemned in the case of boys and girls who are passing through the terrible ordeal of sexual development, an epoch which, as we have already seen, is peculiarly favourable to the formation of the neurotic habit; and I must emphatically state my belief that, among the seriously-minded English middle classes more especially, whose life is necessarily colourless and monotonous, the mischief thus worked is both grave and widely spread."

Writers on subjects so obscure and so little investigated as the etiology of neuralgia are apt to incur the charge of over-refinement in analysis. But no competent observer of modern middle-class life will dispute the soundness of many of Dr. Anstie's conclusions.

Dr. Anstie is unusually successful, we think, in defining the extent to which neuralgia is influenced by vaso-motor paralysis. For example, all the congestive complications of trigeminal neuralgia he would (at least in the present state of our knowledge) explain on the basis of that paralysis, believing, as he does, that the paralysis is a direct extension of the original morbid process from the sensory root to the motor, affecting the origin of the fibres in the latter, which are destined to control the calibre of the ocular and facial vessels. We are unable, however, from want of space, to enter into any critical exposition of this part of the work.

From the judicious arrangement by which Dr. Anstie has relegated the counterfeit neuralgias to a separate part of the book, his chapter on the diagnosis and prognosis of neuralgia proper is reduced to very succinct dimensions. The treatment forms the subject of the next and concluding chapter of the first part, and is discussed in an equally satisfactory manner.

Biological Science in relation to Religious Belief. Being the Introductory Address at St. Mary's Hospital School, 1871. By ALFRED MEADOWS, M.D., M.R.C.P., Physician-Accoucheur to St. Mary's Hospital, Lecturer on Midwifery and the Diseases of Women and Children at St. Mary's, &c. London: Renshaw.

IT is refreshing in these sceptical days to meet with a man of faith, who has the courage of his opinions, and who takes a public opportunity of declaring the compatibility of religious belief and scientific knowledge. We have shown our respect for the views entertained by Dr. Meadows by publishing his lecture in full in our columns. We are glad to notice that, in obedience to the wish of many friends, he has published the lecture separately. We do not mean to say that the argument is at all points equally strong. There are at places assumptions which are more convenient than convincing. But, allowing this, Dr. Meadows's address is one fairly justified by the profound importance of matters of faith, and the vague and unsatisfying nature of the answers given by science to questions which occur to every thoughtful man concerning his own nature, his duties, and his destination. We commend it to the study of students, and of all who wish to cultivate both science and reverence, and who see nothing in the revelations of science to supersede the other Revelation which is still so precious to most of us.

REPORT
OF
The Lancet Sanitary Commission
ON
NIGHT-NURSING IN THE LONDON HOSPITALS.

No. II.

LAST week we briefly stated what were our main objects in instituting this commission of inquiry. This week we commence to lay before our readers the results of the labours of our Commissioners. Night-visits have been paid to every variety of hospital—general, special, and pauper; and we shall hope eventually to bring under the notice of the profession the results of a comparison of the various systems obtaining at each institution. For the present, however, we merely purpose to state, as simply and with as little digression as possible, what was the actual state of things existing at the time of our visit, which in almost every instance was made without any immediate warning being given to the authorities. The hospitals are reported on in the order in which they were visited.

At the *Royal Free Hospital* (Gray's-inn-road), with rather better than 100 beds, we found seven nurses on night duty, not one of whom had yet had a twelvemonth's experience of her work. They were all probationers, and most of them very young. There was not a single fully trained nurse on duty. The wards of the hospital are large, and some of them remarkable for their great length. The fireplaces are at one end of the ward, and in front of them is usually a high screen. The nurse on night duty sits by the fire, behind the screen, a situation we should have thought most conducive to sleep. She must be, in this position, fully seventy or eighty feet from some of her patients, and totally unable either to see or hear accurately any slight disturbance occurring in the dim obscurity of the far end of the ward. There is no regular system here for the night-supervision of the nurses. The lady superintendent is a most active and intelligent person, who labours at the calling she has chosen *con amore*. She spares herself in nothing that can in the smallest degree add to the efficient performance of the task she has taken in hand, and not only does she exercise a watchful supervision during the day, but occasionally makes a night-visit as well, in order to satisfy her-

self that all is as it should be. This is, of course, most praiseworthy, but we hold it to be of the greatest importance that the system of night-supervision should be systematically carried out (especially where the night-nurses are, as in this case, raw recruits) by a person who is not expected to perform any day duty at all. The wards at the Royal Free are all separated from each other, and in case of a nurse requiring immediate assistance on account of any sudden catastrophe, such as secondary hæmorrhage, she would have to leave her ward, and of necessity her patient, while she went in search of it. The atmosphere of the wards, on the occasion of our visit, was all that could be desired. The hospital is nursed by the nurses of the "British Nursing Association."

At *Charing-cross Hospital* the wards completely occupy the three floors of the building. The women's wards are on the first floor, the men's on the second, and the top floor is occupied by a children's ward, a small operation ward, and a ward for the diseases of women. Excepting on the top floor there are no doors between the wards, which all communicate with each other; and a nurse in any one ward can easily, if need be, call to her assistance the nurse in the next ward. There are eight nurses on night duty; two on the top floor (which contains a less number of beds than the others), and three on each of the two lower floors, and it is always arranged that there shall at least be one experienced nurse on each floor. There is no night-superintendent here, but the lady superior is often in the habit of making a night visit, and it not unfrequently happens that she visits a ward without the nurse being in the least aware of her presence. The nurses know that her visits are made at various hours and without any previous warning, and they are consequently always on the *qui vive*. We had the advantage of a lengthy conversation with this lady on the subject of night-supervision, and she stated that she preferred to keep the supervision entirely in her own hands, and objected to the appointment of a paid superintendent at night, mainly because she thought it highly desirable, on moral grounds, to place implicit confidence in those of her nurses who experience had taught her were trustworthy and steady. Further, it would be exceedingly difficult to get a *lady* to undertake the night work solely, and she was sure that the nurses would very much resent being watched over by one of their own class. We are aware that there is possibly some truth in this, and we are not prepared to assert positively that, at this particular hospital, where the wards are of so peculiar a construction and the arrangements are carried out as above stated, the appointment of a night-superintendent is absolutely essential to the efficiency of the nursing. The wards of the hospital on the occasion of our visit were remarkably airy and sweet.

At *King's College Hospital*, which, as in the last case, is nursed by the ladies and nurses of St. John's Home, there is a staff of 28 nurses. Of these 18 are employed on day duty and ten on night duty. Of the 18 day-nurses, 8, or less than half, are probationers; and of the 10 night-nurses 7, or more than two-thirds, are probationers. Thus it will be seen that the staff of night-nurses is in every way (whether regard be had to numbers or quality) markedly inferior to the day staff. On the occasion of our visit the actual distribution of nurses for the night was as follows:—In "Fisk" ward, containing 13 beds and 11 patients, there was one probationer. In "Albert and Victoria" ward, with 26 beds and 24 patients, there was one nurse and one probationer. In "Wigram," a ward of similar size (for female surgical patients), there were two probationers, one of whom had only had three weeks' training in surgical work, but had been seven months in a medical ward. In "Craven," a medical ward with 26 beds, there were also two probationers; and in "Twining" ward, with 22 beds, and in the Children's ward, with 18 beds, there was (in each) a nurse, and a probationer between the two wards, who was to spend half her time in one and half in the other. The wards of King's College Hospital are very spacious and entirely separated from each other. Many of the wards are almost completely divided by solid partition walls, so that many of the so-called single wards might, with nearly equal propriety, be spoken of as two. There is no regular system of night-supervision, but the sister in charge occasionally goes through the wards at unexpected hours during the night. In "Fisk" ward, which is set apart for accidents, the probationer on duty in case of sudden emergency would be obliged to leave her ward to seek assistance. And in Twining and the Children's wards the same undesirable state of things obtains in one or the other throughout the night, according to the position of the probationer. We are sorry to hear that mistakes have been made in the administration of the night doses of medicine, and that patients have been given the drugs which were not intended for them.

The Children's Hospital (Great Ormond-street).—This hospital contains about 70 beds, arranged in four wards—two big wards, one convalescent ward, and one fever ward. It is not nursed by any nursing association; the arrangements being practically in the hands of the matron and the lady superintendent of nursing, who are subject, if need be, to the control of the committee. The matron, who took infinite trouble to show and explain to us the nursing arrangements of the hospital, informed us that it is necessary during the day to provide one experienced nurse for every eight children, but if the nurse be a new one, that she is not capable of attending to more than five children. Children during the day require far more attention than adults, but at night they can do with much less, as a child, unless seriously and acutely ill, is almost certain to sleep during the whole of a long night. The staff at the Children's Hospital consists of 13 nurses. Of these, 10 are on day duty and 3 on night duty. The night-nurses are thus distributed: one in each of the big wards and one in the fever ward. The convalescents have no regular night-nurse, but one of the day-nurses to sleep in their room. There is no specially appointed superintendent of night-nursing, but in each of the big wards there is a bell which rings in the lady superintendent's bedroom, so that in case of emergency the nurse on duty can summon assistance without leaving the ward. Each ward is provided with a slate, on which are written the orders for the night-nurse, and we found in each of the wards the said slate (a big one) covered with numerous written directions concerning A's diet and stimulants, B's medicine, and so on. The Children's Hospital, as might be expected, is peculiarly fortunate in obtaining the assistance of a great many lady volunteers, who aid very materially during the day in complying with the various demands which the little patients make upon their attendants' powers of endurance and patience. There are no lady volunteers on the night-staff.

AUSTRALIAN MEAT.

EXCELLENT and wholesome meat may now be procured at from 4½d. to 6d. per pound. Here is good news for the small housekeeper and the artisan. "But where," we fancy we hear the parties referred to exclaim, "can this great boon be obtained?" We will tell them by-and-by, and with the greater pleasure because of the present ruinous and often prohibitory price of meat as sold by most butchers; but we must first say a little more about this relatively cheap meat.

Uncooked meat in the joint contains on an average about one-fifth, or 20 per cent., of bone; and it loses in the cooking of what is not bone about four-sevenths, a little gravy being furnished as well: so that, taking a joint of 12 lb. weight and deducting the bone, all that remains capable of being eaten is about half the original weight, or 6 lb.; the price being clearly doubled. Now the meat to which we have alluded is bone-free and also cooked, so that a pound of it goes twice as far as a pound of raw butcher's-meat. We have said that it is wholesome: to this we would add that it contains all the nourishment of meat of good quality, and that it is tender, sweet, and sound. We are not making these statements at random, but are testifying to what we know. Of the meat in question we have often partaken; and, when really hungry, we would scarcely desire anything better or more sustaining. The only fault of such meat known to us is, that it is oftentimes somewhat overdone.

Well, now for the *dénouement*. The meat referred to is none other than the "Australian preserved meat," against which some degree of unfounded prejudice existed on its first importation; this, however, is now fast dying out, and will completely disappear as the truth becomes known. In fact, should the present high prices of butcher's meat continue, we predict for the preserved Australian meat a great demand.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 11, 1871.

THE Hampstead Hospital inquiry has at length terminated. A vast amount of very conflicting evidence has been laid before the Inspectors, and we have no desire to anticipate the conclusions of the Local Government Board as to the amount of truth in the specific charges brought against the management, or as to the degree of praise or blame which may be due to the individuals concerned. These are important questions; but we are of opinion that they are secondary to one of far deeper moment—viz., whether, in face of the experience gained during the last twelve months, the Legislature has selected the best and most satisfactory machinery for dealing with great epidemics in the metropolis, and, if not, whether that machinery can be altered and improved. The materials for answering this question are as yet imperfect. Much of the evidence brought forward during the recent inquiry bears upon it, but the Local Government Board would do well to institute a special inquiry into the management of all the other hospitals, and into their relation to local authorities and the public generally in both a sanitary and economical point of view, for the purpose of obtaining sufficient data for future action.

Previous to the Metropolitan Poor Act of 1867, the responsibility of providing for great epidemics in London devolved partly on boards of guardians and partly on vestries or boards of works. There were at that time thirty-nine boards of guardians, who were bound to provide special wards in the workhouses for the treatment of infectious diseases, and to afford medical advice and medical necessaries to all paupers who could not or would not be removed to them; whilst, for the treatment of what are called the independent poor, there were, and are still, some forty vestries endowed with uncontrolled and unlimited power of engaging sanitary inspectors, abating nuisances, diminishing overcrowding, erecting hospitals, removing patients to them, and, if necessary, retaining the services of every medical man residing in the infected district. Unfortunately, both these authorities had a very low estimate of the importance of the duties thus imposed upon them. Boards of guardians contented themselves with sending annual subscriptions to the Fever and Small-pox Hospitals, and neglected to provide proper infectious wards; and although it must be kept in mind that the erection of large hospitals like that at Hampstead, and extensive asylums like those of Caterham and Leavesden, formed no part of THE LANCET recommendations, the erection of such hospitals and asylums proved the truth of our Reports on Workhouse Infirmaries, and the need of some great reforms. Nor was the public more satisfied with the conduct of the vestries and boards of works. The recurrence of great epidemics found them always unprepared. The apathy of vestrymen on sanitary questions was only equalled by their ignorance. And a Tory Minister not unwillingly took advantage of the state of public opinion to try the experiment of forming a more concentrated and aristocratic board, composed of the *élite* of boards of guardians and leavened by a goodly number of scientific and independent men.

Now, in examining the result of this experiment, it is very necessary to remember that even upon boards of guardians and vestries the force of public opinion was in no case lost. The recent improvements in the structure of workhouse infirmaries, in the nursing arrangements for the sick, in the dietary and treatment of the aged and infirm, are in no way due to legislative interference. They were the simple result of a better state of public opinion brought about by the publication of our own Reports. And if no central Metropolitan Asylum Board had been formed the guardians would have been compelled to provide a sufficiency of hospital accommodation for persons suffering from infectious diseases, just as they are being compelled to provide sufficient cubic space. So, also, if we desire to measure the effect of public opinion on the action of vestries and boards of works, we should contrast the energetic measures taken in respect to the cholera in 1866 with the comparative inaction of thirty years ago.

Let us now inquire what the effect of this experiment has been in the case of small-pox. First, then, it relieved boards of guardians and vestries of the necessity of providing local small-pox hospitals. The guardians said: "Small-pox patients are henceforth to be considered as belonging to the community at large. The expense of erecting hospitals and maintaining the patients in them will henceforth be paid for from the common poor fund. Why, therefore, should we trouble ourselves about a duty from which we have been legally excused, or tax our local constituents for an expenditure which legally belongs to the whole metropolis?" Nor was the argument lost upon the vestries. Some of them took action, as they ought, and opened local hospitals. But many saw clearly enough that there was no time to discriminate between paupers and independent people, and that, in the metropolis, overcrowding in the homes of the independent labouring classes would always render removal to hospitals desirable, if accommodation could be found; they therefore delayed the erection of local small-pox hospitals, in the hope that the accommodation provided by the Asylums Board would prove sufficient; and they were encouraged by the knowledge that the expense of this provision would be borne by the whole metropolis, instead of by the locality itself. Nor were their expectations disappointed. Tradesmen, professional men, and persons of independent means, have been admitted to the hospitals of the Metropolitan Asylums managers. It came out in evidence that a person living on his means had all his children treated in the Hampstead Hospital at the public cost; and even in the hospitals opened by the vestries, in some of which a charge was made, it cannot be supposed that any patient paid the full expense of his treatment; whilst many such hospitals received more paupers than independent poor. No fact is now more certain than that there is no need whatever for a double set of hospitals, and that the just requirements of all classes of patients who cannot be isolated in their own dwellings may be met by proper classification in the same

hospital, the subsequent question of payment being made to depend on the ability of each individual to pay.

The real effect of their relieving the local authorities of the duty of providing local hospitals was to put an unknown and impossible amount of labour on the Metropolitan Asylums Board. Evidence of this crops up at every point of the Hampstead inquiry. The managers were from the commencement in the dark. They proposed to erect three small-pox hospitals, each to contain a hundred beds; but there was not the remotest probability of this number being sufficient to meet the case, and experience has proved that nearly ten times that number were required. Even this intention was frustrated by the Poor-law Board, and, under a fit of economy, the proposed hospital at Hampstead was given up. Then came relapsing fever; and whilst giving the managers the fullest credit for intelligence and zeal, and for the erection of what we regard as the most successful hospital structures in existence, yet we are bound to remember that the arrangements were only just completed as the epidemic ceased, and that the hospital was closed just at the moment when it might have been of the greatest use in checking the rising epidemic of small-pox. The fact is that the managers, not having any direct and official connexion either with medical officers of health or with the medical officers of the Privy Council, who were the only persons having knowledge of the approaching evil, had no warning that hospitals would be so soon and urgently required. Until months afterwards they had no machinery by which the increase of small-pox could be made clearly known to them, and the epidemic found them in November last utterly unprepared. All afterwards was hurry and confusion. The announcement of the opening of the Hampstead Hospital stopped all action on the part of guardians and vestries, and from that moment no amount of labour on the part of the managers or their officers sufficed to provide for the pressure. Patients were brought to the hospital doors by scores, and soon by hundreds. One after another, wards were built and opened. One after another, the hospitals were occupied in haste. The new furniture was often put in with the patients; and servants came from all sorts of doubtful sources, the power of selection being narrowed by the nature of the case. Then the kitchen arrangements were found to be upon too small a scale, and cooking became a real difficulty by the side of alterations and enlargements actually going on. Then the laundry was too small, and women could not be found to do the work, so that it became impossible to provide clean sheets for every case. Then, again, there were difficulties as regards the medical staff. The managers, unfortunately, refused to carry out the promises of Mr. GATHORNE HARDY to appoint visiting physicians and surgeons, of whom any number might certainly have been secured; but they elected residents who, having enormous responsibilities and very little knowledge of the world, failed to pull together. And then the necessity for further accommodation was evident; and the chief medical officer was entrusted with the management of a convalescent hospital four miles away, when he was already overworked. His work was thenceforth doubled, and every one of the 300 patients admitted in a week had to be entered and discharged twice. Under such circumstances can it be a source of wonder that very grave mistakes were made. Was it extraordinary that the officers who failed to prevent the loss of a child should have found but little time to look after "Hampstead donkeys," or pay much attention to the supply of towels. The whole history proves that the managers were utterly unable to replace the labours of the seventy public bodies who would have been bound to act in their respective localities if the Metropolitan Asylums Board had not been formed. No one can doubt either their zeal or industry; and the wonder is, not that there was failure, but that they did so much.

We believe, therefore, that the second great lesson is, that no central board can be relied on for organising the measures necessary for meeting a great epidemic amongst a population of three millions without the assistance and co-operation of local authorities. And the problem is,—How can this assistance and co-operation be secured? No one will doubt that it is unwise to leave the question where it is. Cholera may come; and the confusion which has been characteristic of the recent epidemic, if repeated, would be fatal. The thirty boards of guardians and the forty vestries must be brought somehow into harmony with the Metropolitan Asylums Managers; and the sooner Mr. STANSFELD sets about the solution of the difficulty the more hopeful shall we be that the measures taken will be general, economical, and successful.

DR. MAUDSLEY has recently called the attention of alienists to the very important question of the use and abuse of sedatives in the treatment of insanity. He suggests, rather than affirms, that the temporary peace obtained by the action of sedatives may be deceptive in its character, and hurtful in its eventual influence. He thinks that natural processes tending to the removal of noxious matters from the system may be arrested or checked; and that the brain-cells may be placed in a sort of chemical restraint, which, like bodily restraint, may increase the malady while it suppresses its manifestations. He asks for some experiments upon the treatment of insanity without sedatives; and relates a few cases of his own, which have done well under such management. He refers to the large use of opium that at one time prevailed in asylums, and mentions the researches of Dr. CLOUSTON with regard to its action, which led to the conclusion that the drug "soon lost its effect; all the patients lost weight while taking it; their average temperature fell; the pulse was lowered; and in all cases it interfered with the proper nutrition of the body, and pushed it one step farther down hill in the direction of death." There can be no better illustration of the influence of routine upon treatment than the fact that a medication, which showed such results to a careful and systematic observer, was for many years accepted as the practice proper to be pursued.

The doubts raised by DR. MAUDSLEY have, it should be observed, a far wider range of application than to lunatics alone. The use of sedatives in general medicine is open to a great variety of questions, not the least important of which is the danger of causing patients to have

habitual recourse to them after convalescence is established. On the very border-ground between alienist and general practice, in the treatment of delirium tremens, the present generation has heard opium extolled as a specific and denounced as a poison; and it is certain, we think, that the current of opinion among practical men is now distinctly adverse to its use, regarded merely as an agent for producing sleep. In the presence of pain, however, the verdict of clinical experience would be emphatically in its favour, more especially in the treatment of ordinary inflammation attended by pain, the subjugation of which will usually be a necessary antecedent of favourable changes in the nutrition of the affected part. In specific inflammation, on the other hand—as in gout and rheumatism,—its usefulness is more limited, and is at most such as to place it only in the list of adjuvants to more essential treatment. Even on these points, however, our knowledge is almost entirely empirical, and we can scarcely claim to possess any certain information about the mode of action of a medicine that is given every day. If this be true of opium, how much more is it true of drugs more recently introduced or less freely prescribed. A few years ago there was a marked inclination on the part of young physicians to enter upon certain definite branches of therapeutical research; and this spirit, if it be not extinct, could find no better outlet than in investigating the action of the different agents that we roughly class together as sedatives, and in telling us something definite about their influence upon bodily functions and organs. We do not mean by this that a committee should follow the example of Dr. BENNETT and his coadjutors, who fancied they could arrive at conclusions about the action of mercury on man by administering it to dogs; but we would suggest a real inquiry, founded on the legitimate (according to our present lights) use of sedatives in practice, and on a comparison of the results produced in sick men, under like conditions, by giving or withholding them. In such an investigation it would be in the power of alienists to render most important help, and to make good the claim they now seem anxious to assert—that of being fellow-workers with other practitioners in the advancement of the healing art.

In a recent number we touched upon some salient points in the ethics of medicine, and in the same number (Oct. 14) a correspondent drew attention to some of the difficulties which beset the path of the consultee who is desirous of remaining on good terms with his professional brethren while doing his best for his patient. "A General Practitioner," writing on the 28th ultimo, has relieved us of the duty of insisting upon the wrongfulness and absurdity of a medical man claiming a prescriptive right in a patient because he lives in a certain locality and has at one time consulted him; for, whilst we hold it to be both wrong and unfair for a patient to throw over his or her ordinary medical adviser without due reason assigned, there is no legal or moral bond to prevent the patient consulting one or half-a-dozen other doctors as fancy may direct. It is the forgetfulness of this which leads to half the disputes between medical men, and fills our columns with appeals for justice. A physician or surgeon practising as a consultee is ordinarily at home for consultation during certain hours of the day, and cannot refuse to see any patient coming to him for advice, fee in hand. Many of these patients, perhaps most, come without any introduction; and it would clearly be undignified for the consultee to investigate particularly *why* they have come, his reputation being presumably a sufficient attraction. Sometimes a patient may volunteer a statement that a friend has recommended him, or, it may be, explain that, feeling dissatisfied with a former adviser, he has chosen to consult his present adviser of his own accord. It is obvious that under these latter circumstances it would be invidious to investigate too closely the patient's antecedents, or to attempt to open communications with his former medical attendant. The advice, and particularly the prescription, which the patient receives from a consultee are clearly the patient's own property, and he may do what he will with them. He may follow the advice and take the prescription, made-up at the nearest chemist's, or he may disregard the advice and take his ordinary medical attendant's opinion upon the prescription at his will; and no one can complain, for he is only exercising his right as a British subject to do what he likes with his own!

But we will take the case of a patient visiting a consultee by the ordinary attendant's direction. In this case either the attendant should accompany the patient or should send a letter of advice by him, to which the consultee is, in our opinion, bound to send a written answer. If the attendant neither visits nor writes to the consultee, he can hardly be surprised if he receives no communication from him, and for the following reason:—When a patient is accompanied by his doctor, or brings a letter from him, the case is one of *consultation*, and the patient pays a corresponding fee; but if a patient merely comes for advice, and pays a single guinea as a casual patient, it is not reasonable to expect a busy consultee to write a long letter with details of treatment without remuneration. Practitioners, in the country especially, have too often little idea of the taxes upon the time of London consultees, and grumble that they do not more freely communicate by post; the foregoing may, perhaps, suggest a ready cure for the evil.

The question of a consultee retaining patients merely sent to him for an opinion is a very serious one; since any open effort to attract another's patients must always be viewed with the greatest disfavour by all honourable men. We believe the cases of the kind which occasionally occur are sometimes due rather to the action of the patient than of the consultee, who is often purposely kept in ignorance of the name or position of the prior attendant. An honourable man will refuse to treat a patient sent to him by another for consultation without communicating with him, and we condemn the man who does not do this; but what is to be done if the patient refuses point-blank to allow anyone else to treat him but the physician or surgeon in question? He can only apologise to the discarded doctor for taking his patient; but he too probably makes an enemy of him for life. And yet, as we said before, a patient has an undeniable right to act thus, and no law of medical ethics can or will prevent him.

The position of a consultee called into a patient's house by a practitioner is much simpler, for he can refuse to see the patient except in consultation, and, if need be, may throw upon the patient the *onus* of dismissing the family doctor. The rule that the last-comer should cease his attendance first is so well ascertained that we need hardly refer to it; but a question occasionally arises as to whether the regular medical attendant or the consultee should communicate the result of the consultation to the patient or his friends. Premising that no consultee is justified in expressing any opinion as to diagnosis or treatment without retiring for private consultation with the ordinary medical adviser, we hold that it is more convenient that the result of the consultation should be communicated by the consultee; for the patient naturally expects an expression of opinion from him, and though that opinion may be influenced by that of the ordinary attendant, a patient is justly entitled to know what the consultee thinks of his case. It is obvious that the greatest tact must be exercised so as not to shake the position of the ordinary attendant, particularly if the opinions do not completely coincide; and certainly the consultee should endeavour to eclipse his colleague as little as possible, and should leave in his hands, as far as he can, all directions for the future conduct of the case.

IT cannot be doubted that we are not sufficiently alive to the frequency and importance of the remote effects of syphilis upon the body. This conclusion is the inevitable consequence of a careful survey of the facts which pathologists have of late years disclosed—in regard, for instance, to lesions of the nervous system,—and also of the results of therapeutical observation. Whilst, on the one hand, we are discovering new syphilitic lesions, we are likewise recognising more completely the modifying influence of the syphilitic taint upon various diseases accompanied by structural changes. It is specially with the former category that we are now concerned. Our object is to direct the attention of English practitioners to a tertiary syphilitic lesion in the deeper structures of the fingers and toes, accompanied by peculiar deformities, which is practically unknown in England, though it has received special attention elsewhere. Its literature is scanty in details, and, as far as accurate information goes, of very recent origin. The best account is given by an able and rising dermatologist of New York, Dr. W. R. TAYLOR, in a recent number of the *American Journal of Syphilography and Dermatology*. The disease is called *Dactylitis syphilitica*. It is true that in 1859 CHASSAIGNAC called attention to it, but his description was very meagre; and subsequently NÉLATON, Professor LÜCKE, M. ARCHAMBAULT, RIEHL, BERG, and ERLACK, recorded solitary cases. But the disease has never been so carefully studied as by Dr. TAYLOR, who sums up all we know about it; and we believe we shall be doing good service to practitioners if we give a general sketch of the complaint. The disease is a chronic specific inflammation, involving one, and most frequently all, of the phalanges, without implication of the nails. There are two forms, according to Dr. TAYLOR: the one, in which the subcutaneous tissue, as well as the fibrous structures of the articulations and the phalanges, are involved; and the other, in which the morbid process begins in the periosteum and bones, and implicates the joints secondarily, and may or may not be accompanied by gummy deposit in the subcutaneous tissue. There is no absolute line of demarcation between the two. The invasion of the structure by gummatous growth is the essential disease. When the connective tissue is the seat of disease, the deposit is more marked in the dorsal than in the plantar and palmar surfaces; but it does not show the usual tendency to disintegration. The integuments covering the growth become violaceous in colour, and are tense, resistant, and painless. One phalanx or all may be involved—generally one. After a while the fibrous coverings of the bone and the joints become affected—the ligaments, capsules, and cartilage probably. Deformity results sooner or later. In the second form of the disease periostitis may be the starting lesion, or the gummy deposit may take place in the cancellous tissue about the medulla. The enlargement of the fingers and subsequent deformity are very marked; the parts swell, and are distended into a hard, firm enlargement. The gummy material is not found, as a rule, subcutaneously in this form. The bone is absorbed, the shaft lessened, the fingers shortened, and false joints formed, but without suppuration—we have, in fact, what VIRCHOW termed "dry caries" of syphilis. The fibrous textures of the joint may, as in the first variety, be implicated, but not necessarily.

The diagnosis of this affection has to be made from gout, rheumatic arthritis, whitlow, periostitis, and enchondroma. But dactylitis has concomitant evidences of the syphilitic taint; it has no acute or painful symptoms, as have gout, whitlow, and rheumatism. It is painless, and runs a chronic course; it involves specially the dorsal surface; often only one joint. If recognised early, the prognosis is favourable, since the adoption of the treatment for late syphilis is very successful.

Our main reason for directing attention to the disease is because Dr. TAYLOR'S excellent paper has attracted a great deal of notice in every other country save our own, where this dactylitis seems to have been overlooked.

Medical Annotations.

"Ne quid nimis."

AN OFFICIAL FUNCTIONARY AND SINECURIST.

WHEN Mr. Gladstone addressed his constituents at Blackheath he dwelt in indignant terms of denial upon one charge in particular that had been brought against his Government. It had been said—and said with confidence—that economy had been practised at the expense of clerks and dockyard labourers, while the sinecurist and official functionary of a higher position remained untouched. Now, if the Premier desires to give an earnest of what he told his constituents, we can help him towards effecting a piece of economy by the abolition of a perfectly useless post. The Americans during their war constructed a larger number of hospitals than any other nation had done previously, and what is more, they managed to administer them with an amount of success, in a sanitary point of view, that has never, we believe, been surpassed, if equalled. We have it officially

on record that these hospitals were exclusively organised and administered by military surgeons, and that no military governors or executive military officers had anything whatever to do with their internal economy and management. We have a large military hospital at Netley, with a numerous medical and surgical staff, and an inspector-general who, before he arrived at Netley, had been entrusted with the medical supervision of the whole British force in India; and his immediate predecessor, again, was one of the most experienced officers and best administrators in the service; but one and all of these are considered unfit to manage the Netley establishment without the aid of a military governor. We have not a word to say against the officer who was, or now is, acting as the military governor, beyond this—that he answers to Mr. Gladstone's expression, of being an official functionary of high position and a sinecurist at the same time. If Inspectors-General Muir and Beatson do not possess the capacity to administer the establishment at Netley, they certainly ought not to be entrusted with undertakings of a vastly more important character. We have not the pleasure of knowing the present governor even by sight, but we can confidently declare that no such functionary is needed at Netley, and that the income he receives is neither more nor less than an unnecessary outlay of public money. It is time the attention of the House of Commons was directed to this subject. If the naval authorities have discovered that the management of their large hospitals can be effectively carried on by the medical officers themselves, which is the fact, there can be no necessity for the presence of a military functionary at Netley, distinct from the medical branch of that establishment.

THE UNIVERSITY OF EDINBURGH.

THE winter session of this grand old school began on the 1st of November with an address by Principal Sir Alexander Grant, which contained much interesting information as to the work and prospects of the University. Lately in the University a record or history of first-year students has been kept, called "The First-Year Book," which supplied the Principal with many data of great interest, upon which, as on the general position of the University, he commented instructively. The attendance of students is no less than 1768, an advance of 70 on the previous year, and the largest number for more than the last forty years. The increase is chiefly in the Medical faculty, in which there are 678 students. Of the 189 first entrances for the purpose of studying medicine, 26 had previously attended other Scotch universities, 6 had attended English universities, and 7 foreign or colonial universities; 98, or at least half, were foreign both by birth and residence to the soil of Scotland, and had come as pilgrims to a shrine of learning. Among the birth-lands were twenty-one of the counties of England, Ireland, and Wales, the Channel Islands, Malta, St. Helena, Cape of Good Hope, Mauritius, India, Ceylon, Australia, Tasmania, Nova Scotia, Canada, the United States, the West Indies, South America, France, Germany, Spain, and Switzerland. Ninety-three joining the University for the first time came to study law, of whom 77 came straight from school to begin their special studies. In the faculty of Arts there were 296 first entrances, at an average age of rather over nineteen. As many as 33 of these have been admitted below sixteen, and 59 at sixteen years of age. The Principal saw in these figures an indication of the remains of an old tendency in Scotland to send boys to the University at a very early age. Sir Alexander Grant spoke with much force on the reasons for encouraging and regulating the study of the subjects in the curriculum in Arts by constituting them into a degree curriculum. The new chairs of Geology and Commercial Economy, founded respectively by Sir Roderick Murchison and the Merchant Company of Edinburgh, and to which Mr. Geikie and Dr. W. B. Hodgson have been respectively appointed, were noticed with great satisfaction by the Principal, who also proposed the institution of three new chairs—a Professorship of the Roman Languages and Literature, of the Teutonic Languages and Literature, and of the Fine Arts. The able address wound up by some spirited words on the great need of good secondary schools in Scotland as a link between the ordinary schools and the University. With all the faults of the educational system of Scotland, there is much in it that on this side of the Tweed we need to study. In England we are suffering deeply from the want of even primary schools. The great medical school of Scotland still seems to have a grand future before it, and it will not be seriously rivalled by London until the southern metropolis has learnt to concentrate its teaching power.

THE PATHOLOGICAL SOCIETY.

AT the meeting of this Society on Tuesday last there was not exhibited any morbid specimen of very peculiar or unusual interest; the discussions, however, were for the most part interesting, and showed how many and plausible interpretations may be given of the more common phenomena of the dead-house. Dr. Pye-Smith exhibited a specimen of cystic dilatation of the kidney, supposed to be consequent upon a stricture of the ureter resulting from an injury. Dr. King showed an unusually fine specimen of splenic infarct, which had been removed from a patient who had died with extensive heart disease and softening of a large part of the anterior lobe of the right cerebral hemisphere. The discussion which followed tended to show that the usual embolic theory of these cases was not always to be received without question. Dr. Murchison, in particular, combated the generally accepted doctrine, and quoted cases which had come under his notice at the Fever Hospital, in which extensive infarcts of internal organs had been found without any disease of the heart, and in which, consequently, the embolic theory could not be maintained. Mr. Hulke exhibited four specimens of epithelioma removed from patients of the Middlesex Hospital. The cases were all of some years' standing. In three removal had been successfully effected, and in one the disease returned and ultimately proved fatal. These cases tended to show that epithelioma is to be regarded as a local disease.

THE ROYAL WARRANT AND SICK OFFICERS.

ACCORDING to the Royal Warrant just published, it would seem that, in the matter of exchanges, the officer exchanging will be permitted to defray all fair and reasonable expenses, provided that the sum to be paid for that purpose be approved by the Commander-in-Chief before payment is made. We presume that fair and reasonable expenses are not intended to include the payment of any bonus over and above the travelling and other incidental expenses; and we shall be interested to learn what course will be pursued with regard to officers desirous of exchanging on the score of bad health. Cases like the following are of everyday occurrence. An officer, after serving with his regiment or battery of artillery in the plains of India, or at Peshawur, say, contracts fever and dysentery. He is invalided to England, and told by his medical attendants at home and abroad that he should on no account return to India, or, at any rate, that he should not return until his health has been fully re-established by a long residence in a temperate climate. The officer in question may have

been a thoroughly zealous, efficient soldier, and his disease is directly attributable to his having done what he was ordered to do. To go on half-pay implies ruin to his professional prospects, just as the return to his corps implies ruin to his constitution. Up to the present time an officer so circumstanced has generally been able to procure a substitute by paying for him; but no one of course would be tempted to quit a good climate for a bad one by an offer to defray his expenses in getting there. No injury was done to the public service by the system of exchanges for money; for a medical certificate was required as to the health and physical fitness of the officers exchanging. On the other hand, a needy man of strong constitution was often considerably benefited. Now, it seems clear to us that the Government must be prepared to make some provision for the cases to which we have alluded, otherwise there will be no end to the hardships that will arise.

SIR ROBERT CHRISTISON, BART.

HONOURS have been literally showering on Professor Christison. It is but a short time ago that we had occasion to record the placing of his bust in the library of the University of Edinburgh, accompanied by the presentation of a replica of the same to the members of his family. We have this morning to announce the bestowal of a baronetcy on him. This latter honour has been merited by services, scientific, professional, and academic, second to none in our recent domestic history. The accomplished toxicologist and pharmaceutist, the lucid and suasive lecturer, the skilled physician, and the enlightened academic legislator, Sir Robert Christison has done more for the great northern school of medicine than any of his colleagues in the Senatus for the last half-century. As a citizen he has been public-spirited, energetic, and enthusiastically patriotic—witness his most effective co-operation in the volunteer movement, and in all measures for the welfare of the student. Full of years, Sir Robert Christison still possesses a vigour of mind and body which ranks him with most of his younger colleagues, and which must enhance the public gratification at the dignity now conferred upon him, as likely to derive additional lustre from the prolonged life he may in all likelihood enjoy.

INSTRUMENTS FOR DISTINGUISHING LEAD FROM BONE.

IN the accounts of the Dublin trial much stress has been laid upon the doubts that rested on the minds of the surgeons as to the presence of the ball, notwithstanding that Nélaton's porcelain probe and other instruments were used to distinguish between bone and lead. Our readers are probably aware that apparatus for utilising galvanism have been recommended, such as those of M. de Wilde and of Messrs. Krohne and Sesemann. We have heard from some army medical officers of a very simple and ingenious method of attaining this end,—the invention of Mr. John Taylor, of Kensington. The instrument consists of a pair of bullet forceps, with blades electrically insulated from each other at the joint, and connected by means of wires with a minature pair of galvanic plates, one of the wires being coiled round the case of a compass needle, thus constituting a small galvanometer. On the pocket instrument case to which this is attached being opened, and so arranged that the needle stands parallel to the wires, the moment any metallic body is touched by the blades of the forceps, indication is given by a deflection of the needle, enabling the operator to know with certainty whether it is the proper object or a piece of bone he is touching. We may further state that this apparatus is inexpensive, and that it is contained in a common pocket case. The voltaic plates are only two inches square, and when wrapped in gutta-percha tissue their activity is preserved for weeks, and is easily renewed at any time by remoistening the woollen cloth between them with a few drops of acidulated water.

MEDICAL CHARITY REFORM.

THE Council of the Charity Organisation Society have just adopted some important resolutions on the subject of medical charity. Besides drawing up a code of laws for provident dispensaries, they express a very strong opinion as to the pauperising effects of indiscriminate medical relief at hospitals and dispensaries, and that the most hopeful remedy is a large extension of the provident principle. Of the half-million patients relieved at the metropolitan general hospitals, they believe that a large proportion could afford to pay a local practitioner, and a still larger number are quite in a position to pay the 6s. or 8s. a year required to secure medical attendance and medicine when ill.

The Council believe that indiscriminate medical relief may be greatly curtailed without seriously affecting the supply of cases for clinical instruction, and they recommend the adoption of THE LANCET suggestion, to affiliate the provident and Poor-law dispensaries with the public hospitals, that proper cases may obtain the advantage of hospital advice and treatment. They recommend that all applicants, except in cases of accidents or of urgency, should be required to obtain the certificate of one of the Society's inquiring officers. They recommend the conversion of free into provident dispensaries, the former being less needed than ever now that Poor-law dispensaries are being opened.

These suggestions can only be carried out by combined action, and they advise that a conference of the governors and medical officers of hospitals and dispensaries be called in December, at which Mr. Stansfeld and Mr. W. H. Smith are expected to be present.

WEST COAST FEVER.

THE maritime intelligence of the *Shipping Gazette* still includes records of much sickness imported from the West Coast of Africa and the West Indies, whereby ships' crews are crippled, the lives of all on board endangered, and commerce hindered to a very considerable extent. It is reported by telegraph from Liverpool, dated Nov. 3rd, that a schooner arrived at that port from the Gambia, after a passage of ninety-four days, having lost six men (including the captain) out of a crew of nine hands all told, so that the navigation of the vessel was left to the mate, the cook, and one able seaman. Miserable disasters of this kind have been so often reported lately that, in the interests of commerce as well as of humanity, some official notice should be taken of the subject, and some remedial or prophylactic plan recommended. It is well known that most vessels trading to the districts above indicated are small, ill-ventilated, and insufficiently manned. Their crews average from six to nine hands, and these are frequently berthed in a lower forecastle, which is the very worst class of accommodation, and which rivals in "stuffiness" the quarters provided in some of our inferior coasting vessels. The provisions are seldom superlatively good, and, as a matter of course, medicines and medical comforts are kept at a minimum. These small vessels remain at anchor for days and weeks off the mouths of the West African rivers; an irregular and very severe form of ague, commonly called West Coast fever, attacks the men; quinine and medical stores are soon exhausted, and the result above recorded not unnaturally occurs. And it is tolerably certain that much of this wretched sickness and mortality might be combated and prevented on board ship as successfully as scurvy. Large

doses of quinine, given in accordance with very simple instructions, will "break the neck" of this form of ague very completely; and a liberal scale of diet, with moderate attention to ventilation and cleanliness of quarters, will do the rest. It appears that up to the present time steamships are but little, if at all, used in this class of commerce. There is no doubt that they will in this, as in all other branches of the shipping trade, ultimately find a chief place; but, until such is the case, it is the duty of the Board of Trade to encourage, and, if necessary, to enforce enactments tending to the diminution of a disease that is undoubtedly preventable. Nearly four years have elapsed since the Duke of Richmond's Act came into operation, the result of which has been to reduce the cases of scurvy that occur annually in the mercantile marine of the country by 70 or 80 per cent. And there is no reason why an equally successful result may not be obtained with reference to West Coast fever.

A GERMAN FELD LAZARETH.

To the "St. George's Hospital Reports" an excellent account of the working of a German Feld Lazareth has been contributed by Mr. W. Ewart, who became connected with one of the German lazaretto hastily organised to receive the victims of the 31st of August. Mr. Ewart's experience resolves itself into five *momenta*. 1. The general treatment of the wounded and sick. 2. The German and the French bullets compared in their action. 3. The mode in which German surgeons conducted operations. 4. The mode in which fracture of the thigh was treated. 5. The nature of the water-treatment as seen at Stenay. Mr. Ewart is very clear as to the wisdom of treating the wounded in the open air—the only course, indeed, that in many cases was possible. Interesting details as to the attendance, regular and volunteered, on the sick are succeeded by an account of the "Eiterbecken" and the "Irrigator," two implements in which the ambulances abounded for treating wounds. The former served admirably to collect the pus; the latter to inject antiseptic lotions into the suppurating cavities; while carbolic acid and oakum proved a most successful application. Great differences were observed by Mr. Ewart in the liability to sickness of the several nations represented in the German armies, the Prussian being decidedly the strongest, the Saxon the weakest. Then, as to the projectiles used by the belligerents, Mr. Ewart confirms what we have already noticed—to wit, that while velocity is in favour of the French bullet, weight is in favour of the Prussian. The extent of injury caused by the Chassepôt bullet was in direct proportion to the resistance offered; on the other hand, wounds from spent balls were much more common in the French than in the Prussian ranks. Reluctance to operate was, Mr. Ewart says, characteristic of the German surgeons; excessive alacrity of the French—the primary amputations among equal numbers of French and Germans being far more common among the former than the latter. The section which Mr. Ewart devotes to the German treatment of fracture of the thigh is most interesting; but would be hardly intelligible unless given in his own words, for which we have not space. We can, therefore, only recommend it to the reader. His concluding remarks on Dr. Ducluzaux's water-dressing by continual irrigation are also well worth attention. The wounded limb is placed on a slightly inclined surface, furnished at its most depending edge with a tin gutter, which empties itself below. The water drops from a funnel-shaped vessel suspended above the bed, the flow being regulated by squeezing a perforated cork tightly into the neck of the funnel. By this means, says Mr. Ewart, "the inflammatory symptoms and the local swelling were subdued with the greatest rapidity, and the wounds seemed to be guarded against all deleterious influences." Mr. Ewart might, with much advantage, republish his notes in a less fragmentary form. As it is, they are interesting in their tenor, and effective in their style.

THE LATE OUTBREAK OF CHOLERA AT SECUNDERABAD.

THE results of an inquiry into the circumstances attending the outbreak of cholera in the 18th Hussars at Secunderabad in May last have just been published by Surgeon O. R. Cornish, F.R.C.S., the Sanitary Commissioner for Madras, who was engaged with others in investigating the matter. Cholera appears to have been established at Juggeapett, about 100 miles distant from Secunderabad on the east, on May 8th. On May 20th three travellers, who had passed over this eastern road, died of cholera in a chuttrum near "James's Bazaar," the most densely populated part of Secunderabad. The details of these cases are furnished by Deputy Inspector-General Dr. Barclay. On the evening of May 23rd some cholera-stricken travellers were detained at a village near the Hussar barracks. At the time immediately preceding the outbreak in the 18th Hussars there had been a remarkable absence of electrical disturbances in the atmosphere, and the wind from the 3rd to the 24th May blew strongly from the north-west, a direction in which it was quite certain that no cholera existed. After reviewing all the circumstances connected with the outbreak the Sanitary Commissioner sums up as follows:—"The cholera was introduced into Secunderabad by travellers passing over an infected area on the eastern coast road. The outbreak in the 18th Hussars followed the appearance of the disease in the Bazaar, and in a village in close proximity to the barracks. The simultaneous outbreak in the hospital barracks and the family quarters of the Hussars points to a common exciting cause in relation to either air, food, or drink. There is no evidence to show that the atmosphere around the Hussar barracks was differently constituted to that of other portions of the cantonment, and the food supplies were exactly of the same nature as those used by other corps. The Hussar regiment, so far as is known, differed only from the other European troops in using water from a public well that was liable to receive extraneous impurities. The actual fouling of the parade-ground wells by cholera matter, though exceedingly probable, cannot be directly proved."

THE PUBLIC HEALTH.

THE Registrar-General's Return of Births and Deaths registered in England during the three months ending September 30th—the summer quarter, as it is officially styled—exhibits a birth-rate somewhat below, and a death-rate slightly above, the average of the season. Small-pox, though less fatal than in the previous quarter, was nine times as destructive to life as it was in the summer quarter of last year; measles, whooping-cough, and diarrhœa were very prevalent, and caused a large mortality; the scarlet fever epidemic, though showing a decline in fatality, carried off, nevertheless, 3488 persons. The aggregate of deaths from all causes in the quarter amounts to 121,236; and 31,915 of these, more than a fourth of the whole, resulted from eight forms of zymotic disease alone. We take it that this simple fact, stated thus in the briefest manner, speaks more forcibly than the most eloquent language of the great and pressing need there is for such sanitary legislation as will, in a speedy and effective way, help to put an end to the sad ravages of preventable disease among the people of this country. The drain upon our population resources

which the increasing tendency to aggregation in large towns causes may be inferred from this—that, whereas amongst 9,000,000 inhabiting the rural districts and small provincial towns the mortality last quarter did not exceed an annual average of 17·4 per 1000, the 13,000,000 couped up in the large towns and cities experienced a corresponding loss of 24 lives per 1000. The Registrar-General seems disposed to attribute this striking divergence to "the far greater fatality from diarrhœa which prevails among town populations"; but one would rather like to see the proof of this, for a glance at the tables of the Return reveals numbers of instances in which districts of unimpeachably rural character experienced a diarrhœal mortality relatively as great as, and in some cases in excess of, that of London. From whatever cause, however, the fact remains that, had the death-rate been as low last quarter in our large towns and cities as it was in the rural districts, there would have been fewer lives lost by 21,663 in the former than actually perished. Those who hold with the Registrar-General that "under perfect sanitary organisation" a town should be as healthy as a purely rural district, will find in the existing state of things, as evidenced by the figures just quoted, ample scope for any amount of zeal, energy, and practical work. We are a long way at present from much real experimental knowledge of what "perfect sanitary organisation" could do for rural communities; the towns have enjoyed a monopoly of attention from sanitary reformers hitherto, but it is to be hoped that the turn of the villages will not be too tardy in coming. Some facts contained in the Return relative to infant mortality are deserving the attention of the Infant Life Protection Society. Nearly one-third of the deaths registered in England during the three months happened to infants in their first year of life. Adopting another basis of comparison—viz., the proportion of infantile deaths to the births registered,—it appears that in seventeen of the largest cities and towns the ratio of infantile deaths was 27·6 per cent., while it was 16 per cent. in the rural districts. Why should this ratio have so wide a range as between 16·9 per cent. in Wolverhampton and 46 per cent. in Leicester?

COAL-MINING.

IT will much assist plain persons in forming an estimate of the great importance of the Ballot, if we set before them, a little more exactly than we have hitherto done, an account of the dangers which beset the business of coal-mining, when it is conducted under no proper supervision, and with no legal or disciplinary check upon the proceedings of illiterate men, rendered rash by the combined effects of ignorance and of daily familiarity with danger. We all know that the propriety of secret voting is a new dogma, like that of the Papal infallibility, and that even among the most tried members of the Liberal party there are still a few persons of the Döllinger type, not yet convinced that it is either true, or necessary to political salvation. We shall best demonstrate the folly of this scepticism, and the necessity of stringent measures against those who yield it, if we measure the importance of the Ballot by that of only one of the reforms that is to be set aside to make way for it. We learn that, in the year 1870, *nine hundred and ninety-one* persons were killed by coal-mining; and that in no previous year since 1865 had the number fallen short of *one thousand*. The ghastly total is made up by 185 deaths from explosions of fire-damp, 411 by falls of coal or roof, 129 in shafts, 186 from miscellaneous causes underground, and 80 by accidents on the surface. Of such deaths about 10 per cent. are due to causes unavoidable by ordinary foresight, and the other 90 per cent. would be prevented by the enactment of a moderately stringent law to punish individuals for doing things which are already forbidden, but against which no penalties are now enforced. It therefore rests with the Government to save 800 or 900 lives every year as soon as they please; or, more properly, as soon as the pressure of higher duties leaves them leisure for the task. If they were frail, as other mortals, it would be difficult to smother some doubts of the soundness of their judgment; and if they were mere quacks and political tricksters, it would be difficult not to feel some indignation at a vast sacrifice of human life to the real or fancied exigencies of party. Of course a thousand more miners will be killed in 1872. That is inevitable. But if, by any undue loquacity on the part of Liberal members of Parliament, by any recalcitrants to the call of the appointed whip, by any devices of benighted Conservative or independent members, or by any unreasonable perversity on the part of the House of Lords, the Ballot Bill should fail to pass next session, then another thousand lives will be sacrificed in 1873. We trust, therefore, that those not yet converted to the Ballot will remember that a thousand lives hang upon its speedy adoption; and that this remembrance will make them chary of criticism and absent from divisions. They should yield it to necessity without parley—just as they would pay ransom to brigands who held the lives of their brethren in their hands.

OUR BIG BARRACKS IN INDIA.

WE learn from the *Times of India* that one of the so-called palatial barracks which have been erected in India, in deference to theoretical views of sanitarians who know little or nothing of any climate but their own, has come to grief. The two-storied barracks at Allahabad, which have cost upwards of £200,000, have been pronounced unsafe for occupation. The 104th Fusiliers have been ordered to vacate them, and the men of the regiment are under canvas. By all accounts it is questionable whether they will not be better off, even as regards heat, in tents than in barracks constructed of solid masonry which are said to resemble ovens. If half the money that will eventually be expended on palatial barracks could be laid out in providing cheap structures in suitable situations on the hills, how much more benefit would accrue to the soldiers.

LESIONS IN THE INSANE.

DR. JAMES C. HOWDEN, of the Royal Lunatic Asylum, Montrose, published an analysis of the post-mortem appearances in 235 insane persons in the April number of the *Journal of Mental Science*. The paper has been reprinted, and we quote from it a few of the principal lesions noticed. In 46 cases the brain was to all appearance normal; in 17 the calvaria was thickened; in 20 the dura mater was very firmly adherent to the calvaria; in 7 there were tumours attached to the dura mater; in 12 there were false membranes in the arachnoid; in 62 there was effusion of serous fluid into the arachnoid; in 52 opacity of the arachnoid; in 33 œdema of the pia mater; in 11 sanguineous effusion into the pia mater; in 31 adhesion of pia mater to the surface of the grey matter. The bloodvessels of the base of the brain were atheromatous in 39 cases. In only 1 was there aneurismal dilatation of the arteries of the brain. The grey substance was the seat of gelatinous softening in 9 cases; there was flattening of the convolutions of it in 5, and effusion of blood into it in 1. The white substance was affected with œdema in 44 cases, and with excessive shrinking in 9. There was sanguineous effusion into the corpus striatum in 8 cases, and pink gelatinous softening of this in 9. The ventricles contained an

excess of serum (over two drachms) in 93 cases. The lining membrane of them was affected with crystalline granulations in 64. In 6 cases there was a marked difference of size and weight of the cerebral hemispheres. As regards lesion of other parts of the body, the most frequent was tubercular lesion of the lungs. In 78 cases there was tubercular or cheesy deposit in the right, and in 82 in the left, lung. In 35 there were cavities in the right, and in 42 in the left, lung. Pleural lesions were frequent, especially partial adhesions. But in 31 cases there was universal adhesion on the right side, and in 24 on the left. In 50 cases there was serum in the pericardium; in 24 lymph. In 104 the root of the aorta was atheromatous. In 91 the liver was fatty. In 55 the kidneys showed fatty degeneration; in 31 cases cysts. Dr. Howden has summarised all his observations in a table. The only qualification of its interest is in the absence of any history of the clinical facts associated with the lesions.

THE STILL-BORN.

THE reappearance of the monthly *Bulletin de Statistique Municipale* for the city of Paris indicates that matters there have assumed somewhat of their normal aspect. The statistics in this return relating to the still-born are unique, inasmuch as they go into more minute detail than our English medical men and statists think either profitable or desirable, should it be determined to register the still-born in this country. Thus, out of 182 still-births recorded in Paris during the month of June last, 4 were in the third, 4 in the fourth, 6 in the fifth, 18 in the sixth, 27 in the seventh, 26 in the eighth, and 84 in the ninth months of gestation; the period was unknown in 13 cases. There were 108 males to 73 females still-born, and the legitimates were to the illegitimates as 2·6 to 1.

THE WATER-SUPPLY OF GUILDFORD.

WE congratulate the inhabitants of Guildford on having secured a good water-supply from a new well at Mill-mead. The analysis of this water proves that it contains no ammonia, and only a trace of nitric acid. It is, in fact, a very pure chalk water, containing rather more than twenty grains of solid matter per gallon, of which more than eleven grains are carbonate of lime. We may hope that Guildford will never again be visited by an epidemic depending on the use of sewer-polluted water.

THE Indian Government, it is rumoured, intend shortly to recommence their competitive examinations for the Indian Medical service, and we sincerely hope the rumour may turn out correct for the sake of numerous unfortunate gentlemen who have been tempted to leave their own country, and study the medical profession in England, with a view to entering the above service.

WHILST in this country we have been at some pains to found the medical school at Netley, the Austrian Government are working in a contrary direction. The Josephine School, which has long been established to prepare students for the medical department of the army, is to be dissolved at the end of the year. The professors will be transferred partly to universities, and partly to military corps.

DR. SYMES THOMPSON will deliver the following course of lectures during Michaelmas Term, at Gresham College:—Nov. 10th, "On the Digestive Organs in Health"; Nov. 11th, "On the Disorders of Digestion"; Nov. 13th, "On Cholera." The lectures are free to the public, and commence at 7 o'clock each evening.

LIEUTENANT-COLONEL PELLY, political resident in the Persian Gulf, writing from Bushire, reports all quiet by land and sea on the Arab coast, but states that many deaths from cholera are taking place. The ports of Shangah, Rasul, Rhyma, and Bokha have suffered severely, as many as seventy people being carried off in one day. Cholera has also appeared at the Government station at Bassidore and Bunda Sungow. In consequence of the prevalence of cholera in the ports of Muscat and Bushire, quarantine has been established at Kurrachee for all vessels hailing from the Persian Gulf.

THE German Government have been extremely liberal to the Faculty of Medicine of Strasburg. Permission has been granted to the professors to constitute themselves into a self-controlling body. No salaries will be granted by the Government, but the pupils' fees will go to the maintenance of the teachers and the institution. The winter lectures have just been advertised, the old names, with a few exceptions, appearing as formerly.

THE *Western Morning News* mentions a fact worth notice in reference to the sewage question. Lord Morley undertook to construct sewers at Plympton and the adjacent villages on condition that he might have the sewage for his meadows. The outlay has been a little over £1000, and already the meadows, it is said, have become so fertile that six such seasons as the last would reimburse the whole original outlay.

WE are informed that enteric fever was prevalent in the 10th Regiment while stationed at Yokohama, but that since its arrival in China the disease has completely vanished. It appears that cases of fever began to occur towards the end of June, and for a short time rapidly increased in frequency; but their number had already commenced to decline before the regiment left Japan.

THE Scottish Institution for Imbecile Children is, according to the report read at the last annual meeting of the auxiliary association of subscribers, in a highly satisfactory condition. The feu of the ground on which the institution stands has been redeemed at a cost of £1860. The inmates, eighty-seven in number, show a gratifying proficiency in industrial handicrafts.

ON Wednesday Dr. Sieveking presided at the Quarterly Dinner of the Edinburgh University Club. Dr. Davy was vice-chairman, and the attendance of members was above the average. The evening was spent in a highly agreeable manner—one of the most interesting features being the inauguration of the loving cup contributed by members of the Club.

A PARLIAMENTARY RETURN shows that, out of an aggregate of 1,085,661 paupers in receipt of relief in England and Wales on January 1st last, 48,444 were insane. The insane paupers were thus distributed: 30,275 in public and private asylums, 10,877 in workhouses, and 7292 were living as single patients with relatives or boarded out.

THE city of Lincoln is suffering from a severe epidemic of measles, and the general mortality is high. Mr. Wilkinson, house-surgeon to the Lincoln Dispensary, reports that never have so many patients been admitted during any month as in that just closed.

PROFESSOR PRIESTLEY will, it is stated, shortly resign the chair of Midwifery at King's College, in consequence of increasing professional engagements.

THE

CONTAGIOUS DISEASES ACTS COMMISSION.

No. I.

THE ADVERSE EVIDENCE.

IT will be in the recollection of our readers that the Contagious Diseases Acts, against which so great an outcry has been raised by certain sections of the community, owed their origin to the preponderating weight of medical opinion. The injury inflicted by venereal disease upon our military and naval forces aroused attention to the serious evils occasioned by prostitution, and medical science was requisitioned to devise the proper method of dealing adequately with disorders of national importance. The system thus called into existence is believed to supply the only sufficient remedy for a disease whose extent and virulence cannot easily be exaggerated. The results obtained, though from a medical point of view eminently satisfactory, appear, in the opinion of persons who seem to claim the exclusive possession of a higher moral consciousness, to be fraught with the most alarming and disastrous consequences. To the clamour excited a Royal Commission was conceded, and the result of its labours has now been given to the public. With every desire to do full justice to the opponents of the Acts, we must confess that, so far as their views have been hitherto placed before us, we are unable to perceive that their intrinsic weight is worthy of the ardour with which they are supported. We therefore gladly turn from the excited utterances of platform orators and pamphleteers to the dispassionate statements of carefully selected witnesses. The evidence presented to the Commission may be reasonably expected to explain clearly and fully the grounds upon which the bitter and uncompromising opposition of which we are spectators is based. We therefore propose, in dealing with the evidence, to examine, first, the testimony offered by the opponents of the Acts, which will carry weight with the scientific inquirer in proportion as it shows—1st, that, if the repeal of the Acts is conceded, an adequate and practicable scheme is offered in their stead; 2nd, that the opponents of the Acts show that they possess a just appreciation of the evils against which they are directed; 3rd, that that evidence is, in other respects, worthy of serious attention.

Mr. Jago would treat contagious disease as he would treat any other disease, and would let each individual come as to an ordinary hospital, or a dispensary, or what not. To get the people to apply to these voluntary hospitals he would rely upon sympathy—that is, as he explains it, to the agency of women somewhat allied to the people to be reclaimed, and appointed as regular missionaries and agents, and some other woman as superintendent over them in each district.

The Rev. J. Hawker prefers the voluntary principle, but does not consider that how to work it is a question for him; and though he considers that the Acts require great modifications, he is not prepared with a code of his own. He is not in favour of registration or examination, but would approve of compulsorily detaining until cured a woman voluntarily admitted.

The Rev. J. Metcalfe thinks that the system in operation under the Act of 1864 was extremely useful and beneficial, but that that differed from the present system in this respect, that it dealt with venereal disease, and not prostitution.

Mr. Littleton, being asked, "In the event of these Acts being repealed, how do you propose to deal with the great question of prostitution?" replies that he entertains strong opinions upon it, but would rather not give his view of the matter. On being further asked if he has any suggestions, because the object of the Commission is to get all the information it possibly can, he makes the somewhat oracular response that the subject of prostitution is a very great and serious question.

The Rev. J. Webster thinks that, if the Acts are to continue, all soldiers seen entering brothels should be examined as well as the prostitutes. His view of the Acts, however, is that they legalise prostitution, and that it would be better that they should be repealed, and men and women left to their chance, as they were before. He would, however, shut up women who were practising prostitution in a diseased state; in other words, that if it was known that a woman was practising her trade while suffering under such disease, she should be taken to a hospital, or allowed to go voluntarily, and kept there until free from disease.

Mrs. Lewis thinks that if we had a law to punish the seducer, and to make it a criminal act for a man to seduce a girl, in whatever position of life she might be, it would greatly diminish prostitution; and if, on the other hand, we had free hospitals, free homes, and free refuges, accessible by Christian men and women for their reformation, that would decrease the number considerably.

Mrs. Butler would be satisfied with nothing but the entire repeal of the Acts. Her remedies would be to punish seduction, to alter the law of bastardy, to create a higher standard of public opinion as to the vice of men. Her measures would be directed against prostitution itself, and against both sexes, and the rich as well as the poor. Further, she would increase the number of industrial pursuits for women. She, however, admits that the evil is much deeper than the law has yet reached, or can reach. She would have voluntary lock hospitals, and trust to an agreement to secure the detention of the women.

Mrs. Kell is not prepared with any remedial measures at all; and though at one period of her examination she would appear to have relaxed a little, she soon became conscious of her error, and entreated to be allowed to enter her warm and earnest protest against her own admission, on the ground that any fresh legislation, although confined to extreme cases, tends to withdraw one of the terrors of fornication.

The Rev. E. Kell of Southampton, husband of the preceding witness, would give liberty to marry to the soldiers, and would make it penal to seduce a woman; and he would not eject from hospital diseased women who applied voluntarily, but would admit and treat them in the same way as other diseased persons.

Mr. D. Cooper, secretary of the Rescue Society, considers it an unjustifiable infringement of a woman's liberty to detain her in hospital till cured, and of course would not bring her there by any compulsion; he would provide voluntary hospitals, and believes that they would be resorted to. Supposing these Acts were repealed he would not propose any substitute for them. Things as they were were much better than things as they are; that is, the provision of voluntary hospitals was much more effectual on the whole than these Acts have been for the very purpose for which these Acts were formed. Mr. Cooper deals with the three objections usually made against voluntary hospitals: 1st, that there is not sufficient accommodation; 2nd, that women will not enter; 3rd, that, if they enter, they will not remain till they are cured. With regard to the first objection he states that their claims to support have never been sufficiently set forth, and anticipates a marked change in this respect. With regard to the second objection, he doubts the alleged fact; and asserts that the third is contradicted by his own experience. He considers, however, that the women should be themselves the judges of when they ought to be discharged. In the voluntary hospitals which Mr. Cooper would like to see established, he would desire that the managers should have a restriction to prevent women communicating with the outer world, and prevent women being dependent on persons with whom they have associated in the outer world; for instance, they should prevent them communicating with brothel-keepers, upon whom they might be in some measure dependent, and they should generally have such restrictions, rules, and regulations as will keep the women from communication with the outer world, such as in homes where the isolation is complete.

Miss Browne would prefer voluntary hospitals, without compulsion of any kind.

Mr. Thomas thinks that solicitation should be repressed, and that the existing law, if made a little clearer, independently of the Acts, is sufficient for the purpose. He would attach lock wards to the existing hospitals, and be-

lieves that there would be no difficulty in getting women to come to them, and cites a Bristol hospital as an example of what may be done. He would not detain women compulsorily until cured. He would permit the State to supplement public hospitals if necessary, and would not altogether repeal the Acts until the necessary adjuncts were provided. He would arrest very young prostitutes as loiterers, and send them to industrial schools.

Mr. Richardson would repeal the Acts immediately, and substitute for them Government efforts to reclaim fallen women.

Dr. Prosser James would put down street solicitation, and deal with very young children. He would otherwise not deal with prostitution, but prefers to see the report and evidence before recommending the repeal of the Acts.

Mr. Dunn would erect voluntary lock hospitals at the public cost or by public subscriptions. He would not detain women till cured by compulsion.

Dr. Bell Taylor would establish voluntary hospitals throughout the country. He considers it desirable that the women should be detained till cured; but would, apparently, trust to persuasion.

Mr. Shaen would deal with the causes of prostitution. He would improve the laws that tend to elevate the class from which prostitutes are drawn. He would make brothel prosecutions more easy, and make the use of a house for such a purpose a ground of forfeiture of the lease. He would enforce stringently the laws against solicitation. He would deal with abduction, procuring, and seduction, and generally would introduce such legislation as would make the law of, and the ideas concerning, chastity equal for both sexes. He is in favour of the extension of voluntary hospitals.

Mr. John Stuart Mill, although opposed to the Acts, is not opposed to an attempt being made by the State to diminish the amount of disease by providing lock hospitals, provided always it is not done with special favour to this class of diseases, but forms part of a general system, such a system as it might be thought advisable for the State to adopt with a view of getting rid of serious and especially contagious diseases as far as possible throughout the country. In other words, he would not object to the State supporting hospitals for this disease if contagious diseases generally were considered a proper subject for the State to take under its charge. Independently of legislative action he would increase the hospitals and increase the facilities for admission of those who are diseased. He would neither compel women to go into hospital, nor after admission compulsorily detain them until cured. He would lay severe penalties on the man who communicated this disease to an innocent woman, and if to a wife it should be ground for a divorce *a vinculo*, accompanied with heavy damages for the benefit of the sufferers—the wife and children. He would place young girls in industrial homes, leave to the police the repression of street solicitation, and make it a cause of forfeiture of the licence for a public-house or beer-house to be used as a brothel. His present feelings is against any attempt to restrain illicit intercourse by strengthening the laws against seduction and bastardy.

Dr. C. Drysdale has not the slightest doubt that if we had hospital accommodation provided by kind people throughout the country, as we do for other diseases, we might lessen the amount of venereal disease considerably, and seems to anticipate no difficulty in getting women to avail themselves of such institutions.

The Rev. C. H. Ellison considers that the Legislature, in whatever it does, should recognise the act of prostitution as a sinful one. He would establish voluntary hospitals, into which diseased persons might go, and would make it penal for women either to give the disease or to prosecute their calling in a state of disease.

Mr. R. B. Williams believes that if the Commission should recommend the repeal of the Acts, efforts would be organised for the purpose of preventing prostitution and ameliorating the condition of the prostitutes. He does not believe that prostitution is a question of supply and demand; but thinks that it owes its chief root to wrong public sentiment as to the comparative criminality of unchastity in men and omen. This he would hope to remove by the educational effects of judicious legislation. He hopes that there will be many mitigating influences at work, and that thereby, and by the progress of education and the provision of better homes for the working classes, prostitution will be reduced. He would make deliberate seduction penal, and would start industrial homes, to be subsidised by Government, in which orphan and necessitous female children might be saved from a possible career of vice. He would also establish voluntary hospitals, and believes that women would gladly avail themselves of medical treatment, and that a little persuasion would be effectual to detain them until cured.

With the exception of one or two witnesses who opposed rather the method of carrying out the principle embodied in the Acts than the principle itself, we have now travelled through the whole of the hostile evidence in search of some system that may be substituted for the one in question. We have contemplated, with Mrs. Butler and others, the reduction of prostitution by the regeneration of society through the operation of wise laws, and the universal substitution of high and elevated sentiment for the more selfish and animal instincts that now debase humanity, more especially the male portion of it. To such an enterprise we cordially wish success, but the benefits derivable from it, though full of promise for the distant future, appear somewhat remote and dim for the practical necessities of the present.

Turning from these lofty views to suggestions of more immediate utility, we are met with recommendations for the establishment of industrial homes, and the repression of street solicitation. These will, no doubt, be useful to a certain extent, but the latter at least it will be difficult to enforce without exposing prostitutes to the most arbitrary and oppressive treatment; and the suggestion comes curiously from advocates of the liberty of the subject in its extremest phase. There remains the suggestion, clung to by all these witnesses with a faith worthy of a better cause, that the disease should be met by the establishment of voluntary hospitals. It will be observed that the arguments adduced in favour of this proposition rest rather on hope and belief than on practical experience; these are but poor comforters in the face of past failure, and can only impose upon persons ignorant or oblivious of the medical bearings of the question.

Of this suggestion we shall have more to say on a future occasion; for the present we are content to call attention to the fact, that the people, who are striving to disturb existing arrangements, have nothing tangible to offer in their stead. Such a position is defensible only on the supposition that the Acts are inherently vicious or ineffectual, or the disease comparatively unimportant. We shall therefore inquire in the next place whether these positions, or either of them, are established by the evidence.

POOR-LAW MEDICAL RELIEF.

AT the Medical Club, Spring-gardens, on Tuesday night, a number of Poor-law medical officers, medical officers of health, and other gentlemen interested in the working of Poor-law medical relief, met for the purpose of considering a Bill proposed to be brought into the House of Commons in the next session by Mr. F. S. Corrance, to improve the system of medical poor relief in England and Wales. Dr. Joseph Rogers occupied the chair, and there were present Mr. Corrance, M.P., Dr. Stallard, Mr. Benson Baker, Dr. Welsh, Mr. Fairlie Clarke, Dr. Thomas, the Rev. Mr. Kitto, and Dr. Smythe.

The CHAIRMAN read letters he had received from Mr. W. H. Smith, M.P., Dr. Lush, M.P., Mr. John Holms, M.P., and other gentlemen, expressing interest in this movement, a movement which purposed placing the English system of poor relief upon a basis similar to the Irish. The scheme which was proposed, the speaker said, required that a case should be made out for its necessity, and this case could be made out from facts obtained in the Poor-law Board's own returns. He presented a tabulated statement of districts under medical officers, and pointed out that, by the extent of area, and the large populations in most of those districts, it was impossible the poor could be properly attended by the medical officers, whose duties were so overwhelmingly great. To show the necessity for some new kind of central control, he pointed out that the present central authority permitted the existence of 662 districts, with a population to each of 15,000, and of these 73 were in Wales, and ex-

tended upwards of seven miles from the medical officers' houses. There were 205 districts with populations exceeding 15,000, and 627 districts were held by 291 medical officers. There were 266 medical officers who attended from 1000 to 10,000 cases annually, making on the whole 1493 appointments, or one-third of the whole, contrary to the general orders of the Department. He showed that this acting contrary to the general regulations had been on the increase since Mr. Griffin wrote on the subject in 1857, and he specially drew attention to the case at Birmingham, where, in spite of representations direct to the Department, districts containing 50,000 persons had been assigned to one medical officer, and only one central dispensary had been erected for a population of nearly 250,000. He adduced other cases in which the Department had sanctioned, and continued to sanction, the violation of its own orders in matters affecting medical relief. He proceeded to state that where pauperism which resulted from sickness most abounded, there the provision to meet that sickness was most inadequate, and he advocated the Irish system, as decreasing pauperism, as increasing the health of the population, and as giving contentment to the medical profession. He then asked the attention of the meeting to the views of the hon. member for Suffolk.

Mr. CORRANCE, M.P., said the Bill, the heads of which he was going to submit that evening, had occupied him for some time. He knew it was not a complete measure, and it did not pretend to be complete; but it had been proposed with the object of dealing with the inequalities of our present system, and the proposed Bill had been framed with the aid of the practical knowledge of gentlemen of eminence in the profession. The hon. gentleman then enumerated the principal features of the Irish Poor-law Act, and described the means he proposed to adopt to amend what he did not like in that measure; as, for instance, he would amend the mode of appointing the committee, the mode of issuing tickets for medical relief, the appointment of visiting physicians, and other points of a like character, and on these matters of detail he said practical points could be worked out.

In the course of the debate which followed, Dr. STALLARD urged the importance of having thorough inspection of all medical relief by competent physicians, and the necessity of forming the machinery for the prosecution of persons who undeservedly, or not being necessitous, obtained medical relief. He thought a defined offence should be made of any case where a person obtained relief without being a fit subject for it, and said that as matters stood a regular traffic was carried on in hospital stores obtained by patients—cod-liver oil and such things being sold at the very doors of the hospitals. He also urged that some means should be taken for giving poor people the means of obtaining medical assistance without appealing to the law, and as the result of their own provident habits.

Mr. BENSON BAKER, in dealing with a suggestion that only eminent men should be selected to fill chief offices, urged that the Poor-law service should be placed on a footing analogous to the Army and Navy medical services, in which there was only entry after proved fitness, and then followed by promotion. If that were the case in the Poor-law service it would be a place of honour, and would be much sought after; and surely, he said, it was as important that the health of the general population should be regarded as that the soldiers and sailors should have proper medical treatment.

Mr. CORRANCE pointed out that his Bill comprised all the means which could be attained by an Act of Parliament, and he expressed his willingness to modify one or two points.

The Bill was unanimously approved, and the meeting concluded with cordial thanks to Mr. Corrance and to the chairman.

ADELAIDE HOSPITAL, DUBLIN.

THE introductory address at the opening of the session 1871–72 was delivered by Dr. BARTON. After some introductory remarks on the general use of hospitals, Dr. Barton proceeded to point out that the medical profession has for its first object to save lives from the effects of injury or disease; failing this, to mitigate suffering and prolong life; and when life is not threatened, to prevent deformity, or loss of any useful sense or function. Secondly, to discover the sources and causes of disease, and suggest some means by which it may be prevented. So various are these diseases that a division of labour is made with very great advantage. In all cities the profession is divided into surgeons and physicians, the line of separation being hard to be defined. Besides these two chief divisions there are specialties which, if not carried too far, secure greater efficiency by a further division of labour. He considered that obstetricians and ophthalmic surgeons as specialists were of advantage, but decried further subdivisions as a source of weakness rather than of strength to the profession. Dr. Barton then referred to the humanity which ennobles our profession, and renders it worthy of our most ardent devotion. He impressed on his hearers that no difference of rank or riches, of religion or irreligion, should interfere in the slightest degree with their care of those requiring their skill. Having dilated on the objects and scope of the profession, the lecturer proceeded to the subject of medical ethics, which were those principles of just dealing which should influence honourable men in their intercourse with one another and with the public. Speaking of fees, he said he believed that it was quite as much the real interest of the public as of the members of the profession that the scale of fees usually paid should be maintained at a high standard. The lecturer next turned his attention to the public departments, and after referring to the army and navy, said, as regarded dispensary appointments, that he was sorry to state that the dispensary doctor was still overworked and badly paid. After referring to the benefit to be obtained by constant attendance at hospital, not as lookers on, but as active and zealous workers, giving help, and obtaining for future use priceless knowledge, the lecturer concluded by saying:—"Gentlemen, my colleagues in all the departments of our hospital work, unite with me in bidding you a hearty welcome. We will give you all the help in our power. Nay, we want your help; for, as experience increases and knowledge widens, fresh observers, with useful energy and time for careful research, are needed to extend the triumphs of our noble profession, and add fresh lustre to the world-wide fame of the Irish school of medicine."

MEATH HOSPITAL.

THE inaugural address was delivered by Dr. FOOT. He commenced by alluding to the fact that frequently of late years the opening sentences of the introductory addresses in this hospital had consisted of obituary notices, and expressed the general gratification which was felt that on this occasion the prelude was not to be pitched in a minor key.

Alluding to the conditions which have led students to regard these annual orations as the capital affliction of human patience, while not expecting that he should escape their criticism in many particulars, he assured them that their ears should not be re-assailed with stock quotations from Bacon and the poets. Declining to handle any topics of intense professional interest, or even national importance, such as medical ethics, or state medicine, he preferred to dedicate the occasion to the interest of the young students now beginning to prepare themselves, by hospital attendance, for the future business of their lives. He advised them to devote themselves at first to the art or practical part of medicine, which could be learned nowhere but by the bedside of the sick, and nohow but by personal attendance on them, and written narratives of their illness. The courtesies of the sick-room—no mean accomplishment—were to be upheld here as well as in the chambers of the wealthy. High personal character—a most influential circumstance in deciding their future career,—if now acquired, would prove a powerful ægis in a life peculiarly assailed by temptations of various kinds, and would surround them with an atmosphere pure enough to disinfect even the pestilential breath of calumny. "Work" was the password to success, the key to unlock every difficulty, the thread of Ariadne in the maze of life; but work was not to be of an epileptic kind—in convulsive fits, followed by acute attacks of idleness, which did not exhaust their susceptibilities to

fresh ones, but, by repetition, left the mind a desert with no oasis. Their energy was not to be the flare-up of lighted straw, but a banked-up furnace of dull but sleepless determination. All well-fed, active streams of work find their way, sooner or later, to the great sea of knowledge, and, rising again from that sea, rain down such honour, emolument, and rank to the profession, the public or the State have it in their power to bestow. The scientific part of medicine was to be studied as carefully as the art, but later, because the practice of medicine was the fundamental necessity. Science, as applied to medicine, meant the physical sciences, and not logic, ethics, and metaphysics. Physical science was striding about the arena of medicine, dealing death-blows to quackery—doing what the art of medicine could not do; and opposition to the influence of science would be as vain as an attempt to stop the motion of the world.

Referring to the threefold object of medicine—the cure, the palliation, and the prevention of disease—he stated his belief that at no very distant time the prevention of disease would occupy the mind of the public and the profession in a degree anticipated by few at present. They should scorn every shape and form of humbug, and abhor and dread it as the tunic of Dejanira. The address closed with a final appeal to those commencing to learn clinical medicine at the hospital this winter, that they would enter on the path of education indicated, and that, cherishing a strong faith in the everlasting power of work, they would persevere until they found their labours crowned with some one or other of the many diadems of success.

THE CLERGY AND THE MEDICAL CARE OF THE POOR IN PLYMOUTH.

IT is again our pleasing duty to notice the interest taken by the clergy in the improvement of the arrangements for medical relief.

At a meeting of the Plymouth Board of Guardians, where the number of district medical officers has recently been reduced, and where the new arrangements have not as yet been sanctioned by the Local Government Board, the Rev. W. Whitley moved that the resolution reducing the number should be rescinded. In doing this, he said that the guardians had to consider first the poor, who must be taken care of, and secondly, though this might be a secondary consideration—the interests of the ratepayers. With respect to the poor, the majority of paupers were invalid persons, who applied for relief because of affliction, and of these there were three classes: the casual sick, ill with fever or other curable diseases; the chronic and incurable; and thirdly, those poor creatures who, in the hour of pain and distress, were obliged to send to the parish for assistance. It was astonishing to find the large number of cases. One medical officer had 250 patients in the week. Another said that when he got home in the evening he scarcely knew what to do, he was so fatigued. It was impossible that so large a number could be visited with sufficient frequency. By giving such small salaries, the guardians in effect said to the officers, you must get a private practice to help you out, which must necessarily interfere with their doing so much among the poor. But more than this, the medical officers had to pay for medicines out of their £90 a year. It was idle to suppose that the poor really got the best medicines, or that the medical officer would be able to detect imposition. He urged better arrangements, on the ground of true economy, for if good medical attendance enabled the sick to get back soon to work, there would be a gain as regards the rates.

The motion was supported by Mr. McCarthy, who said that, on the supposition that the medical officer had 150 patients under treatment, and not 250, and that he only spent 3d. per week upon the medicine given to each patient, that would amount to £2 per week, or more than the whole of the money he obtained for his services. By such policy they took away from the medical man the means of properly relieving the sick poor; at the same time they overworked the medical officers, and gave them nothing for their services.

Mr. Williamson thought the main objection was the fact that the poor did not receive the proper medicine to restore them to health, and he suggested that the guardians should have their own dispensary, and find their own drugs. Under such circumstances the medical officer would have the strongest interest in prescribing such medicines as were best adapted to his patients, regardless of the cost of them.

The question was adjourned with the object of awaiting the observations from the Local Government Board; and Mr. Williamson has given notice of motion, "That in future a dispenser should be appointed, and a dispensary set up to supply medicines to the poor."

Correspondence.

"Audi alteram partem."

THE ELIMINATION OF POISONS.

To the Editor of THE LANCET.

SIR,—As I spoke first in THE LANCET, the last word should in courtesy belong to Dr. Johnson; moreover, personal controversy being undesirable, I shall prefer to ask you to publish any further opinions and arguments of mine in another form. To-day, however, the imminent conversion of my opponent presents too great a temptation to be withstood. Dr. Johnson comes to my assistance, and writes: "It is more correct to say that a salt escapes or acts as a poison, or does both, by virtue of the mutual action and reaction of the physical and chemical properties of the salt, and the more recondite properties of the living tissues and fluids." Were I fastidious, I would suggest that physical and chemical properties, as well as more recondite ones, should be attributed also to the living tissues and fluids, and not to the salt only. But it would be ungenerous in me to be fastidious, for Dr. Johnson has expressed in happy language the very truths which, in my blundering way, I have been trying week after week to set forth. It was in my earnest but unskilful attempts to do this that I was led into the similes or analogies which, as Dr. Johnson says, are obviously so unfortunate. I must admit that watches "have not kidneys as animals have," but may I venture at the same time to ask what animals? I have hitherto believed that the majority of animals have no kidneys, and that the kidneys which we possess are but a detail of farther complexity, which does not bear upon the essential nature of incretion and excretion. If my opponent and myself are agreed that substances taken into the body, like the bit of dirt in the watch, simply follow the paths of least resistance, what need of further discussion? These *loci minimæ resistentiæ* are the resultants of the forces, proper and accidental, which act upon the particles, and these curves sweep both inwards and outwards, and they vary widely for various substances. Such variations, however, I contend, do not coincide with the degrees of approval with which, as a friend of my own body, I should regard all possible ingesta. If I was sure that the food and the adulterations which my grocer mixes with it moved in opposite curves, in accordance with a beneficent effort of nature for good and evil, I should be less ungrateful to him than I am. It would serve no good purpose to exaggerate in the least the arguments of either side; but am I exaggerating when I say that the words of Dr. Johnson's numerous and influential school convey the impression that Nature is aroused in some special way by the entrance of a poison, that Nature makes some especial effort for its expulsion, and that such expulsion is Nature's method of curing disease? In a word, as a friend said to me the other day, Nature is now-a-days taking the place of the Almighty. I assert, on the contrary, that a poison taken into the body simply follows the path of least resistance; that if this be outwards so much the better for the patient—if it be inwards so much the worse; and that there is no tendency in poisons to rush to the outside which is not shared in like degree by foods or indifferent substances. To clear up one more point, I may add that it is incorrect to say that Nature has emunctories by which to rid herself of waste and noxious matters.* Nature has issues which

* "The result of a conservative effort to excrete noxious materials from the circulation."—Address in Medicine at Plymouth.

are open to any substances which have given physical and chemical values, be these substances good or bad; and of the molecular values of the scarlatinal or typhus poisons we know nothing. To refer to Dr. Johnson's own illustration of diabetes, I have as much reason on my side if I say that the failure of the patient is in great measure due to the conversion of his hydrocarbons into a form which slips through his kidneys instead of being retained, as my opponent has when he says that the kidneys busy themselves in removing a poisonous excess of grape-sugar. I lean, indeed, to the former supposition, but in any case the illustration serves to point our difference.

Dr. Johnson complains that I have not answered all his questions. THE LANCET, like life, is short, while controversy is long. I am well aware that much remains to be said. In particular I have to point out that I am now meeting him on his strongest ground. Were this shifted to the department of "morbid poisons," I should try to show that even escape is in this case an improbable means of relief, as they act rather as a spark which lights up a heap of inflammatory materials, and that they bring about a transformation of the body, or of parts of it, in the happy completion of which cycle safety consists. In closing this discussion, let me cite one sentence in which I heartily agree with my opponent: this is, that successful treatment depends much upon a careful avoidance of misleading and erroneous theories. So strongly has Dr. Johnson urged this, that he will forgive my anxiety in behalf of that which I hold, wrongly or rightly, to be true; he will remember that to disbelieve a theory is not to disparage its leading advocate; and he will believe, I hope, that I entertain the greatest respect not only for his high place, but also for the energy and talents which enable him to fill it so honourably.

I am, Sir, yours, &c.,

Park-square, Leeds, Nov. 7th, 1871. T. CLIFFORD ALLBUTT.

RAILWAY CARRIAGES FOR INVALIDS.

To the Editor of THE LANCET.

SIR,—Should you consider the following statement likely to be of use, either to your professional readers who have the responsibility of seeing their patients transported from place to place with the least possible suffering, or to lay readers who have invalid friends requiring from them similar consideration, it is very much at your service.

An inmate of my household has long been an invalid, and frequently quite unable to bear either the joltings or tremulous motions of any carriage, more especially of that of a railway carriage, even for a short time, except under the full influence of chloroform.

Change became absolutely imperative last July, but the difficulties of getting to a suitable position seemed all but insuperable, until my attention was called to the fact that the North British Railway Company had a saloon carriage fitted so that a hammock could be suspended in it with perfect facility. By applying to Mr. M'Claren (a most obliging gentleman), the general superintendent at the Waverly station, Edinburgh, this carriage was at once sent to King's-cross, and the invalid deposited in the hammock, suffering a good deal from the jolting over the stones while going from my house to the station.

Within half an hour after starting, the uneasiness arising from this cause had almost entirely subsided, and no disagreeable effects were felt from the motion on the rail, so that after going on for over 400 miles, there was but little increase of suffering, and no great exhaustion from fatigue. The return journey, I have no doubt, would have been equally successful, had it not been that it became necessary to renew a bolt at Preston, which caused delay, and so entailed exhaustion.

The arrangements necessary are simple, being a socket in each end of the two sofas, into which a stanchion or upright is fitted (at present these uprights are not so high by 14 in. or so as I think they ought to be) for supporting the cross-bar, which, on being passed through the folds of a strong elastic band to which the iron grummett of the hammock is secured, renders the contrivance complete, and entirely does away with all motion excepting a little rolling from side to side, which, if unchecked by the bottom of the sofas, or anything left thereon, will not be found disagreeable. It is with the intention of freeing this motion that I advise the height of the uprights being increased by 14 or 15 in.

I may add that I feel certain that the same civility, as to forwarding the carriage to any station at which it may be required, will be shown by the authorities to others as was so obligingly extended to myself.

I am, Sir, your obedient servant,

DAVID DEAS, K.C.B., &c.,
Inspector-General of Hospitals and Fleets.

London, 1st November, 1871.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

SMALL-POX.

IN this city the epidemic still spreads, and at present there are some eighty cases in the hospitals, besides numerous others treated in their own homes. Indeed, the accommodation has been so scanty for the number of small-pox patients that, at a late meeting of the guardians of the North Dublin Union, a resolution was adopted to the effect that nine sheds at Glasnevin should be converted into a temporary hospital for small-pox patients; and that the committee should purchase at once a cab for the exclusive use of conveying the sick to the hospital. The South Union guardians have also consented to use sheds at Kilmainham, which will be entirely isolated, and where sufficient room can be provided to meet any cases which may arise.

The erection of temporary small-pox hospitals will be of immense service. In addition, what is required among the poorer classes of this city is a greater regard for cleanliness, more frequent ablutions, less overcrowding, and the prompt removal of all filth and rubbish in the lanes and alleys of the city.

LUNATIC ASYLUMS.

From the twentieth report of Drs. Nugent and Hatchell, Inspectors-General of Lunatic Asylums in Ireland (published a short time ago), it appears that the number of registered lunatics in Ireland for the year 1870 amounted to 10,266, and of lunatics at large to 6,936; making a total of 17,202. This shows an increase in the number of insane persons in this country, as contrasted with that of the previous year, of 347 for the district asylums; while the returns of lunatics at large exhibit an increase of 357 over that of the preceding year, and a falling off 153 as regards the lunatic and idiot classes in the poorhouses. The cost of support and maintenance in the district asylums amounted to £150,964, being an increase over last year of £10,930, caused by the extra number of patients and the dearness of provisions during the past twelve months. The mortality was 660; 354 males and 306 females.

MILK ADULTERATION.

The adulteration of milk, often to the extent of 50 per cent. admixture with water, has of late become so frequent in Dublin that the Public Health Committee of the Corporation have resolved that, in the event of a second conviction of any dairy proprietor for adulteration of milk, the publication of his name and the offence, together with the penalty, shall be made by a placard upon the front of his premises. This form of punishment has acted admirably in Paris, and it is to be hoped that in this city it may have the same deterrent effect.

Dublin, October 31st, 1871.

Obituary.

JAMES FAWCUS, M.D. LOND., M.R.C.S.E.

DR. JAMES FAWCUS, Inspector-General of Gaols in Lower Bengal, was born in 1833, and died in his mother's house, near North Shields, on October 11th, 1871, of pneumonia, attacking a constitution broken by Indian fever. He studied at University College, London, at Paris, Vienna, and other seats of medical learning. His distinguished ability, good temper, and entire unselfishness, from the first made him

beloved both by teachers and fellow-students. In 1855 he was appointed assistant-physician to the hospital at Renkioi, on the Dardanelles; he afterwards volunteered for the Crimea, and was for some time with the Light Division at the front; in this situation he did noble service in rendering most valuable surgical help to colleagues, which his modesty induced him to ignore, but which was properly rewarded by Sir W. Codrington with the Crimean medal, and by the officers with special thanks. After this he held, till the conclusion of the war, his old post at Renkioi hospital, and also the assistant-surgeoncy to the Land Transport Corps, discharging the duties of these arduous offices with extraordinary zeal and ability. His distinguished chief at Renkioi, Dr. Parkes, speaks with generous emotion of Dr. Fawcus's striking qualities, both mental and physical, at this early age—only twenty-two.

After an interval of two years, spent in study and in Continental travel, Dr. Fawcus entered the Indian medical service (taking a high place at examination), and, in 1859, went to Bengal. More than two years were occupied in service in India and China before it chanced that an introduction from Dr. Parkes brought Dr. Fawcus in contact with Dr. Frederick Mouat, the distinguished Inspector of Gaols in Lower Bengal. Dr. Mouat was greatly struck with his character, and obtained for him the civil surgeoncy at Monghyr, where he at once displayed remarkable administrative capacity. In the matter of sanitary work, this was displayed by the almost immediate reduction which he effected in the mortality at the Monghyr gaol, from an average ranging between 18 and 45 per cent. to the very low figure of 4·35 per cent. Not less remarkable were the ardour and success with which he laboured to improve the moral condition of the prisoners by means of the industrial occupations which had shortly before been introduced into the gaol system of Bengal. He was also a zealous promoter of the "dry-earth" system; and for these various services he received the special acknowledgments of the Government. It is unnecessary to mention all the various appointments that devolved in rapid succession on Dr. Fawcus; enough to say that, even when burdened with twice the amount of official labour which most men could have got through, he never for a moment lost that keen interest in the practical work of the profession which had distinguished him ever since his student days; and to the last would give up any private pleasures to devote himself to watching a bad case of illness in the hospital. He also distinguished himself greatly by the part which he took, with Dr. Cunningham, in scientific researches into the pathology of cholera, and in no respect is his untimely end to be more lamented than because it deprived us of the service of his keen intelligence and indefatigable zeal in this inquiry.

The crowning distinction, so far as external success went, that Dr. Fawcus attained was his succession, at the early age of thirty-six, to the important post of Inspector-General of Gaols in Bengal, on the retirement of Dr. Mouat, who had always entertained and publicly expressed an extraordinarily high opinion of his talents and of the value of his services. Unhappily Dr. Fawcus's health had been seriously broken down by the unremitting labour of previous years, and an attack from malaria which he now experienced (while carrying out some drainage works which were to confer important benefits on his district) took firm hold of his organism, nor were its effects ever shaken off again. With most unselfish loyalty to duty he struggled on, only too long, in his work, but at last was compelled to give up, and in April, 1871, returned to England, a shattered and death-stricken man. A mere accident determined his last brief illness; a cold, caught on a journey to Melrose, turned to pneumonia, which carried him off in a few days, at the early age of thirty-seven.

To those who did not know Dr. Fawcus personally, the above remarks will suggest the outline of a career marked by great intellectual activity, and a large amount of scientific reputation and success. But to his friends—and every one that ever knew him loved him—this record of a life so brilliant and so sadly short will seem a mere skeleton. To clothe the dry bones with flesh one would need to speak at large of those delicate and gentle traits, both of mind and heart, which made his character indescribably attractive to all who had the good fortune to overcome the slight shyness that beset him, and to enjoy familiar converse with him. We are certain there is not one who knew him in this way but feels a poignant regret as he thinks of the loss of this fine nature—manly and tender and true, and dashed with a flavour of poetry as charming as it was rare. His sorrowing wife and young children will have the deep and sincere sympathy of the profession, both in England and in India.

RICHARD T. EVANSON, M.D., F.R.C.P.

WE notice with much regret the death, at his residence in Torquay, of Dr. Richard T. Evanson, whose name is associated with a standard work on diseases of children, of which he was joint author in connexion with Dr. Maunsell. He was educated at Trinity College, Dublin, and, having graduated in medicine at Glasgow, he returned to Dublin, where, for a time, he held the appointment of lecturer at the Park-street School of Medicine, and, later, was appointed Professor of Medicine in the Royal College of Surgeons. His talents and rare personal qualities were rapidly bringing his services as a physician into great request, when an affection of the intestinal mucous membrane, from which he never afterwards obtained complete relief, compelled him to seek a warmer climate. After some years of travel on the Continent, he settled at Torquay, where his high qualities soon won the friendship and esteem of all who knew him. He performed his last public act when, at the unanimous request of the medical profession in that town, he presided at an entertainment given at Torquay to those of their brethren who had visited Plymouth to attend the meeting of the British Medical Association. Though his health had for many years caused anxiety to his friends, his death occurred unexpectedly on the 26th ult. Not feeling well on that day, he had remained in bed later than usual, and he quietly passed away about midday. The immediate cause of death was fatty degeneration of the heart.

WILLIAM DANIEL MOORE, M.D., M.R.I.A.

IT is with regret that we record the death of this gentleman, a talented member of our profession, who died at his residence, Fitzwilliam-square, Dublin, on the 28th ult., in his fifty-ninth year. He was an A.B., M.B., T.C.D., and a Doctor of Medicine of the Universities of Oxford and Cambridge. Dr. Moore was known principally by his contributions to medical literature, to which his knowledge of the Norwegian, Danish, Swedish, and German languages and his extensive scientific attainments gave peculiar value. Among other contributions he was the translator of "Heller's Pathological Chemistry of the Urine," from the Norwegian of Ludvig Dahl, and of Prof. Schroeder van der Kolk's works "On the Spinal Cord, Medulla Oblongata, and Epilepsy," and "On Atrophy of the Brain"; also Professor Donders' well-known treatise on "Anomalies of Accommodation and Refraction of the Eye," for the New Sydenham Society. He was an Hon. Fellow of the Royal Medical Society of Copenhagen, of the Swedish Society of Physicians, and Norwegian Medical Society; Secretary for Sweden, Norway, and Denmark, to the Epidemiological Society of London, and Member of the Surgical Society of Ireland, &c.

JOHN BAIN, L.F.P.S. GLASG.

DIED on September 22nd, 1871, after an illness of nine days. Mr. Bain has, at the early age of twenty-seven years, fallen a victim to typhoid fever, caught in the discharge of his duty, as has, alas, been the fate of too many of our most promising young surgeons of late. Having obtained his diploma in 1867, he served for a summer as surgeon on board one of the Transatlantic steamers, after which he was appointed house-surgeon to the Paisley Infirmary and Dispensary, in which capacity he discharged his duties most satisfactorily for upwards of a year. In May, 1870, he removed to Johnstone, where he was just getting into a large and increasing practice at the time of his premature death. On September 26th his mortal remains were conveyed to their last resting place with masonic honours, the deceased having been raised to the degree of Master Mason only the

night before his illness commenced. Along the route of the funeral *cortège* from Johnstone to Paisley, a distance of three miles, the streets were lined with mourning spectators. Gentle in manner, kindly in disposition, and attentive to duty, John Bain won the regard and esteem of all with whom he came in contact. He leaves a widow, to whom he was married only a year ago.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the primary examination in Anatomy and Physiology at a meeting of the Court of Examiners on the 8th inst.:—

H. F. Banham, Cambridge and St. Thomas's; C. E. Piers, Dublin; C. F. Hutchinson and F. J. Sawdon, Edinburgh; E. E. Sloane and A. Harbinson, Belfast; John C. Brady, Charing-cross; C. W. Harvey and E. J. Ramsey, University College; W. A. May, C. B. Elliott, and Adolphus Bevan, Guy's; Wm. G. Ross, Montreal; T. H Haslam, H. S. Bennett, Charles W. Owen, and A. J. Alliott, St. Thomas's; Charles A. Lloyd and A. Somers Ivens, St. Bartholomew's; James Magill, Cork; J. J. Hyatt, Westminster; Lawrence W. Spencer, King's College; A. C. Collinson, St. Mary's.

Of the 32 candidates examined, 9 failed to satisfy the Court, and were referred for three months' further Anatomical and Physiological study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 2nd:—

Bethell, Alfred, Pelton, Shepton Mallet.
Davies, Arthur Evelyn, Penner House, Newbridge.
Lang, John Messiter, Thatcham, Berks.
Thompson, Henry, Hull.

On the same day the following gentlemen passed their first professional examination:—

Alfred Wilson Emms and Joseph Henry Townend, Guy's Hosp.; George Simpson Kenyon, Liverpool School of Medicine.

At the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry, the successful candidates were:—

1. Thomas Johnston English, St. George's Hospital. A Gold Medal.
2. Sydney Howard Vines, Guy's Hospital. A Silver Medal and a Book.

ON Tuesday, the 14th inst., "The Erratics" will give a performance in St. George's Hall, Langham-place, W., for the benefit of the Great Northern Hospital. "Won at Last," followed by "Charles II.," will be played. The funds of the hospital, we are told, are exhausted.

THE following gentlemen are candidates for the post of surgeon to the Royal Hospital for Diseases of the Chest, vice Mr. Francis Mason, resigned:—Messrs. E. Bellamy, T. Cooke, A. Cooper, D. Freeman, J. D. Hill, and H. A. Reeves. The election, which is in the hands of the Governors, will be by ballot, on the 21st inst.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—An ordinary general meeting of this Society was held on Friday, October 27th, at the rooms, 53, Berners-street. The chair was taken by the president, Dr. Burrows. From the half-yearly statement of accounts read, it appeared that the amount of grants for the half-year ending June 30th was £1370 10s., given to fifty-three widows and fifty children, and the expenses £125 0s. 5d. The available receipts for the half-year amounted to £1479 10s., and the expenditure to £1442 10s. 5d., leaving a balance of only £36 19s. 7d. in favour of the Society to meet any addition to the present grants. Fresh applications have been made from three widows and four children. The directors appeal to the kind assistance of their medical brethren, who, they feel confident, will not from want of help compel them to diminish the relief hitherto accorded to the widows and orphans.

TORSION OF ARTERIES.—M. Tillaux lately read a paper before the Surgical Society of Paris, wherein he stated that he had given up the ligature for torsion with complete success. The author of course mentioned that herein he had followed Amussat's teachings; but did not say one word of the progress of torsion in England. M. Fort writes a sensible letter to the *Gazette Médicale*, where he pointedly alludes to the omission. M. Fort refers, moreover, as an eye-witness, to Mr. Pollock's successful applications of Reverdin's transplantation at St. George's Hospital.

ROYAL FREE HOSPITAL.—The following operations will be performed by Mr. Gant at two o'clock to-day (Saturday):—1. Excision of elbow-joint. 2. Excision of hip-joint.

IN consequence of the failure in the Brighton water-supply, the Town Council have unanimously resolved to take the necessary steps for getting the control of the supply into their own hands.

MEDICAL TEACHING IN AUSTRIA.—The Minister of Public Instruction of Austria has requested the professors to send in an annual report touching their labours, both as to the advancement of science and the teaching of pupils. Minute details are expected, and promotion will be regulated by the importance of the reports.

FOOT-AND-MOUTH DISEASE.—A diminution is reported in the number of animals affected with this disease in Dorset and its neighbourhood. The constabulary returns made up to the 4th inst. gave 145 head of cattle, 601 sheep, and 81 swine, as suffering from the malady, which prevails upon about forty farms in the county.

THE REGULATION OF MINES.—A petition prepared by the Parliamentary Committee of the various Miners' Associations for presentation to the House of Commons, and which is being distributed extensively in South Wales and other coal-mining districts, attributes nearly all explosions to inefficient ventilation, and advocates the appointment of inspectors and sub-inspectors, who should be compelled to make a daily record of all their visits to the mines of their respective districts. It urges the compulsory examination of all managers and agents, and objects to the employment of all young children under twelve years of age.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of this Society was held at Greenwich on the 3rd ult., Mr. J. M. Burton, of Blackheath, in the chair. Mr. John Croft related particulars of a case of inversion of the bladder in a female child, that occurred in his practice at St. Thomas's Hospital, and referred to two or three cases of the same kind that have been recorded elsewhere. Dr. Carr gave particulars of a case of obstruction of the bowels, in which he had performed Amussat's operation. The jejunum was opened, and a very large quantity of fæces evacuated, but the patient ultimately sank. Some little discussion occurred with reference to temperature in such cases, in which Mr. Croft, Dr. Hilton Fagge, the President, and Dr. Carr took part. It was announced by Dr. Purvis, secretary, that at a forthcoming meeting Dr. George Johnson would read a paper on the treatment of cholera.

TESTIMONIAL TO MISS EMILY FAITHFULL.—At the opening meeting of the third session of the Victoria Discussion Society, the Hon. A. Kinnaird, M.P., in the chair, a testimonial was presented in recognition of Miss Faithfull's services in connexion with the industrial and educational interests of women. The subscribers include names well known in art, science, literature, and philanthropy, and amongst them are the Treasurer (the Hon. A. Kinnaird, M.P.), the Earl of Shaftesbury, Lady Franklin, Lord Lyttleton, Sir Charles Dilke, Bart., M.P., and other members of the Victoria Discussion Society. The testimonial consists of a silver tea and coffee service, kettle, and salvers of exquisite design, and a magnificent épergne, designed by Mr. Benson, of Old Bond-street. The scroll, beautifully illuminated by Mrs. Fleet on vellum, bears the names of the subscribers.

AN OVERDOSE OF CHLORODYNE.—At Oxford a few days since an inquest was held before Mr. W. Benner on the body of Miss Florence Matilda Pike, twenty-three years of age, daughter of Mr. James Pike, J.P. The young lady had been suffering from a pain in her side, caused by a liver affection, and had been accustomed to take chlorodyne—sometimes as much as sixty drops at a time—in order to relieve the pain. On Monday night a servant girl slept with her, her eldest sister being away. She noticed nothing particular. Deceased seldom got up before noon. When they went to call her she was quite dead. Dr. Jenkins deposed to the cause of death, and said that the mischief was due to taking one dose before the effects of the other had passed off. Deceased had probably taken half an ounce during Sunday and Monday.

ADULTERATION OF FOOD.—There appears to be a fair prospect of beneficial legislation in the ensuing session on this important matter. Mr. Muntz, it is stated, proposes to introduce a Bill which shall be free from the objections that characterised the abortive measure of last session. It is rumoured that the Home Secretary also intends to bring in a Bill on the same subject.

Medical Appointments.

ALDERSON, F. H., M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for District No. 5 of the Fulham Union, vice F. W. Spurgin, M.R.C.S.E., resigned.

AVELING, C. T., M.B., F.R.C.S.E., has been appointed Medical Officer to the N Division of the Metropolitan Police, vice W. H. Wright, M.R.C.S.E., deceased.

BERNARD, A., M.B., L.R.C.P.Ed., has been appointed a Medical Officer to the Workhouse Infirmary, Brownlow-hill, Liverpool, vice Wm. H. Kirkpatrick, M.B., resigned.

BURTON, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Workhouse, Walsall Union, vice J. Burton, M.D., resigned.

CARTWRIGHT, J. H., M.R.C.S.E., has been appointed Medical Officer for the Eastern District of the Christchurch Union, vice William Watmough, M.R.C.S.E., resigned.

CHIENE, J., M.D., has been appointed an Assistant-Surgeon to the Royal Infirmary, Edinburgh.

COVEY, G., M.R.C.S.E., has been appointed Medical Officer for District No. 1 of the Ware Union, vice Packman, resigned.

CUMBERBATCH, A. E., M.R.C.S.E., has been appointed Surgeon to the Metropolitan Dispensary, Fore-street, vice Sidney Chater, M.R.C.S.E., resigned.

ENSOR, A., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Dorchester District and the Workhouse of the Dorchester Union, vice G. Panton, M.R.C.S.E., deceased.

HENSLEY, F. J., M.D., has been appointed Physician to the Sophia Nursery for Infants, Fulham, vice J. B. Thorne, resigned.

HIGGS, T. F., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Dudley Union Workhouse, vice E. C. Haden, M.R.C.S.E., resigned.

HODGES, F. H., L.R.C.P.Ed., M.R.C.S.E., has been appointed House-Surgeon to the York County Hospital, vice O. Baker, L.R.C.P.Ed., L.R.C.S.Ed., resigned.

HOWSE, H. G., M.B., F.R.C.S.E., Assistant-Surgeon and Lecturer on Anatomy at Guy's Hospital, has been appointed a Surgeon to the Evelina Hospital for Sick Children, vice A. Willett, F.R.C.S.E., resigned.

KNOTT, M. O'M., L.R.C.P.Ed., L.R.C.S.I., has been appointed Surgeon to the Co. Mayo Infirmary, Castlebar, vice E. Knott, M.D., L.R.C.S.I., resigned, and since deceased.

LAMBIE, J., L.F.P. & S. Glas., has been appointed Medical Officer for the Lowick District of the Glendale Union, Northumberland, vice Hunter, resigned.

M'CASKIE, N., M.B., C.M., has been elected Medical Officer and Public Vaccinator for the Great Ouseburn District and the Workhouse of the Great Ouseburn Union, Yorkshire, vice J. P. Hunt, L.R.C.P.Ed., L.R.C.S.I., resigned.

MILLS, S., M.R.C.S.E., has been appointed Surgeon to the E or Bow-street Division of the Metropolitan Police, vice A. Harvey, M.D., M.R.C.S.E., resigned.

NEAL, B., L.R.C.P., L.F.P. & S. Glas., has been appointed Assistant Medical Officer to the Cornwall Lunatic Asylum, Bodmin, vice B. G. Derry, L.R.C.P.L., M.R.C.S.E., appointed Medical Officer for District No. 3 of the Bodmin Union.

ORCHARD, T. N., M.B., C.M., has been appointed a Senior House-Surgeon to the Ardwick and Ancoats Dispensary, Manchester, vice G. H. Pinder, M.R.C.S.E., appointed a Physician's Assistant to the Royal Infirmary, Manchester.

ORWIN, Mr. A. W., has been appointed Resident Accoucheur to Charing-cross Hospital.

READ, C., M.R.C.S.E., has been appointed Resident House-Surgeon to the Royal Orthopædic Hospital, Oxford-street, vice M. W. Bourne, M.D.

SAVORY, Mr. A. H., has been appointed Resident Medical Officer to the Charing-cross Hospital.

SLACK, G. F., M.R.C.S.E., has been appointed Resident Surgical Officer to the Charing-cross Hospital.

SMITH, A. W., M.B., M.R.C.S.E., has been appointed Senior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, vice S. F. Bagnall, L.R.C.P.L., M.R.C.S.E., resigned.

STEELE, J. W., M.D., has been appointed a Medical Officer to the Workhouse Infirmary, Brownlow-hill, Liverpool, vice James Ridley, L.K.Q.C.P.I., L.R.C.S.I., appointed to District No. 3.

SUTHERLAND, J., M.B., C.M., has been appointed Junior House-Surgeon to the Ardwick and Ancoats Dispensary, Manchester, vice Orchard, promoted.

TAYLOR, M. H., M.B., C.M., has been appointed Assistant Medical Officer and Dispenser to the Hampstead Small-pox Hospital.

Births, Marriages, and Deaths.

BIRTHS.

COSTELLO.—On the 18th of Sept., at Dera Ghazee, Khaw, Punjaub, the wife of Surgeon C. P. Costello, 5th Punjaub Cavalry, of a daughter.

DAVIE.—On the 2nd inst., at Nenagh, Co. Tipperary, the wife of Staff Assist.-Surgeon G. S. Davie, M.D., of a daughter.

ENSOR.—On the 6th inst., the wife of J. A. Ensor, M.R.C.S.E., of Tisbury, of a son.

GARMAN.—On the 4th inst., at Clarendon-terrace, Bow-road, the wife of Cornelius E. Garman, M.R.C.S.E., of a daughter.

HARRIS.—On the 31st ult., at Marles-hill House, Godstone, the wife of Dr. Arthur G. B. Harris, of a daughter.

ISTANCE.—On the 4th inst., at Risca, Monmouthshire, the wife of H. Istance, M.R.C.S.E., of a daughter.

WHITTAKER.—On the 1st inst., at Broadway, Co. Wexford, the wife of Wm. Whittaker, L.K.Q.C.P.I., of a son.

MARRIAGES.

NIXON—BLAKE.—On the 6th inst., at Booterstown, Dr. Nixon, of Westland-row, Dublin, to Mary, daughter of the late Dominick Blake, Esq.

OTTERBOURG—COHEN.—On the 6th inst., at Dover, Salomon Otterbourg, M.D., Chevalier of the Legion of Honour, &c., of Paris, to Therese, daughter of the late Rev. B. J. Cohen.

PERKINS—BANNISTER.—On the 7th inst., at All Saints, Hessle, East Yorkshire, Thomas Perkins, Surgeon, of Snaith, to Polly, daughter of Anthony Bannister, J.P., of Kingston Lodge, Hessle.

DEATHS.

BROOK.—On the 13th ult., Henry Brook, M.R.C.S.E., of Bishops-Castle, Salop, aged 59.

BUTLER.—On the 1st inst., at Sherfield Court, Hants, W. Butler, M.R.C.S.E., aged 23.

HANCOCK.—On the 6th inst., at Wedmore, Somerset, John Hancock, M.R.C.S.E., aged 61.

HAWKINS.—On the 3rd inst., John Hawkins, M.D., of Woodstock, formerly of Laugharne, Carmarthenshire, aged 87.

PHILIPPS.—On the 22nd ult., at Bermondsey-street, S.E., Edward Philipps, M.R.C.S.E., L.M., eldest son of the late Owen Philipps, Surgeon, of Aberystwith, South Wales, aged 41.

WILLIAMS.—On the 5th inst., Caleb Williams, M.D., of Micklegate, York, aged 73.

Medical Diary of the Week.

Monday, Nov. 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8 P.M. Dr. Sansom, "On a Case of Endocarditis complicating Phthisis." — Dr. Alfred Carpenter (of Croydon), "On Two Cases of Muscular Anæsthesia, with Remarks."

Tuesday, Nov. 14.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. A. Durham, "On the Operation of Opening the Larynx by Section of the Cartilages for the Removal of Growths and Foreign Bodies."

Wednesday, Nov. 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 2 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, Nov. 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
HARVEIAN SOCIETY OF LONDON.—8 P.M. Mr. Berkeley Hill, "On the Treatment of Surgical Inflammation by Counter-Irritation."

Friday, Nov. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Nov. 18.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—7½ P.M.

Notes, Short Comments, and Answers to Correspondents.

CATTLE DISEASE IN INDIA.

Mr. E. D. Logg, Civil Surgeon, Baraitch, Oudh, writes to us that he was deputed last winter to investigate and report upon a severe outbreak of cholera in the Baraitch district, which followed in the wake of a widespread cattle disease. While so engaged he took the opportunity of making inquiries regarding the latter disease, and learned from the people that its presence among the cattle was owing, in part, to the absence of proper fodder. As the epidemic had not entirely subsided when Mr. Logg visited the villages, he had ample opportunities of witnessing the symptoms of the malady, which appeared to him to be very similar, if not identical, with those of foot-and-mouth disease of this country. After some premonitory symptoms, the animal exhibits febrile phenomena, followed by eruptions about the nose and mouth, with swelling of the throat, and lameness of one foot or of all the feet from the presence of large ulcers. In the worst cases the body of the animal became covered with a pustular eruption, and a bloody discharge flowed from the nostrils, with unhealthy discharges from the bowels. The disease proved very fatal, especially among young horned cattle, death generally taking place from ten to fourteen days after attack, and occasionally earlier.

Barron, (Southport.)—Dr. Meadows's Manual would probably meet our correspondent's wishes. We cannot pretend to answer the second question.

THE letter of *Dr. Mouat* shall appear in our next impression.

ST. THOMAS'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I was present at the conference which took place on Thursday last between the treasurer and students of St. Thomas's Hospital, and beg leave to state that you have been misinformed both as to the objects of that conference and as to the conduct of those who attended it.

The students had not "complained that no provision of any kind had been made for their obtaining proper refreshments"; and certainly they could not have complained "very justly," for no engagement that such provision should be made had ever been entered into with them, and (as you well know) it is not customary at London medical schools (with one or two exceptions) to provide anything of the kind. But the treasurer and others who have worked with them have long recognised that such an arrangement would be for the advantage of students, and took early steps to secure it for them at our new hospital. The object of the conference with the students was not "the ventilation of their grievances," but simply to inform them that the contemplated arrangement had been made, and to give them the opportunity of considering and of modifying if necessary (in their own interests) the working details.

I have had a long experience of medical students, and think I can tell as well as most people when they intend to be disrespectful. But I failed to recognise any intentional disrespect, at all events on the part of the great majority; nor did the insulting cries, which your informant reports, reach my ears. If noisy and excessive applause is to be regarded as disrespectful, I fear that most medical teachers in London are the unconscious victims of continual disrespect.

Whether Sir Francis Hicks is popular with the students or not I really do not know; but I am sure that he merits, and I believe that he has, what is far better, namely, the confidence and respect of all those among them who have had personal intercourse with him, and of all those who have cared to consider how much time and thought and honest work he has devoted, and devotes, to the promotion of their interests.

I remain, Sir, your obedient servant,

Old Burlington-street, Nov. 7th, 1871. J. S. BRISTOWE.

*** We can only say that our information as to the object of the meeting was derived from the students on the spot; and as regards its character and the reception accorded Sir Francis Hicks, our report, we believe, is correct, for two of our representatives were amongst the students and heard even the cries of "sugar." If the students did not ventilate their grievances to the treasurer, they did pretty freely to our reporter, especially in the matter of the accommodation provided for the junior officers. —ED. L.

W. E. G.—Multiply the length by the breadth of a room, and then divide by the number of beds. Allowance ought, of course, to be made for furniture, &c.

Mr. F. Churchill, (St. George-street.)—We shall be happy to receive the notes of cases alluded to, if not too long.

X. Y. Z., (Weymouth.)—It can be obtained of the publishers, Messrs. J. and A. Churchill.

A BATCH OF QUERIES.

To the Editor of THE LANCET.

SIR,—Would you or any of the many readers of THE LANCET kindly oblige me with information on the following points.

1. The best method of making plaster-of-Paris casts and wax models.
2. The construction, arrangement, and furniture of a pathological museum.
3. The best methods for mounting and preserving pathological specimens, especially brains.
4. The best forms of glass jars for preparations, the method of covering them up to prevent the evaporation of the spirit, and the names of persons from whom these jars can be procured.

I should be glad to receive any general hints as to the founding and maintenance of a pathological museum.—Yours obediently,

October, 1871. SPIRITUS METHYLATUS.

SMOKE.

WELL, it is not a very substantial thing. But how it leaves its mark—on our public buildings, on the walls of our dwellings, even on our lungs. The golden age has passed, with other ages. This is the age of soot. Five centuries ago Parliament complained of the smoke and noxious vapours arising from the consumption of "sea-coal," and proclamations were made against its further use. When our rulers shall have settled all the social questions presumably on their programme, they may turn their attention to smoke. Not that this is the least of the evils which denizens of our large towns have to bear. Of course the subject has been touched—grazed. But in this matter, as in others, we want thoroughness. Oh, but London is one of the healthiest cities in the world! It might, however, be a good deal healthier if the dense volumes of carbon which now pollute its atmosphere were lessened; and it certainly would be vastly pleasanter without the hideous black precipitate, which robes all Londoners in mourning, and throws every metropolitan surface and scene into Rembrandt-like shade. But if sanitary and æsthetical considerations are inoperative to awaken efforts for amelioration in the matter of atmospheric purification, there remains the appeal to the breeches-pocket. Leaving out of the question the cost of painting and otherwise cleansing dwelling-houses and public buildings—a huge item of expenditure,—let any well-to-do Paterfamilias having a taste for figures compare his laundry bill at his country seat with his corresponding account in town, and then multiply the difference by the probable number of families in this big city, and he will be able to form a dim estimate of the cost of the luxury of smoke.

Mr. Logg, (Cambridge-road.)—We will examine the specimen of grass forwarded.

SCARLET FEVER.

To the Editor of THE LANCET.

SIR,—On reference to official documents, it appears that from 1865 to 1869 the deaths in England from scarlet fever amounted to 270,782, the most fatal years being 1863, 1864, and 1869. In 15 years 25 persons died over the age of 75. In 1869 the fatal cases throughout England were 27,841, of whom 78 consisted of women recently confined. As usual, the larger proportion of victims were generally young children under 5 years of age; but the deaths of 1 man over 75 and 4 women over 65 are recorded. In London 5841 deaths. In gaols, although families of warders suffer, the prisoners escape. The police enjoy fair immunity. Throughout the army in the United Kingdom in 1869 only 20 admissions, 2 deaths; in Canada, 13 admissions, 1 death; at Malta and New Zealand, an admission each, no death; at the Cape, 3 admissions. From India as yet no fatal records. Throughout the navy in 1868 on home stations, 23 admissions, 1 death at Queenstown, also 4 admissions abroad. At the Foundling Hospital 1 simple case last year. In February, 1867, out of 102 affected, 1 died; none since. At Christ's Hospital last year 8 cases, but no deaths since 1867. At Earlswood in 1869, of 13 cases, 1 died. At Marlborough last year, 73 cases, 4 deaths. At Aldershot, amongst the soldiers' families, the admissions during 1868, 1869, and 1870, ran to 115, 116, and 96; the corresponding deaths, 17, 21, and 11. At Woolwich last year, 64 admissions, 13 deaths. At Chatham last year, 7 admissions, no deaths. At Portsmouth last year, 28 admissions, 6 deaths. At the London Fever Hospital, out of 918 cases, 132 deaths. The epidemic high in September, low in February.

From the valuable Report the complications are here quoted almost *verbatim*. Single instances of ascarides, retention of urine, phthisis, eczema, ulceration of external canthus, ulcer of cornea, suppuration of wrists, synovitis, abscess of the thigh, spinal curvature, empyema, mammary abscess,—all recovered. Of 2 women in puerperal condition, 1 died. 7 instances of ulceration of angles of the mouth, 5 of herpes, 3 of epistaxis, 2 of hæmoptysis, 2 of jaundice, 30 of rheumatism,—all recovered. But of 93 instances of inflammation and abscess of glandular and other cervical tissues, 25 died. Of discharge from the nose, ears, and eyes, 85, of whom 19 died. Also 47 instances of renal disease and dropsy, 9 deaths. Convulsions, 2 cases, 1 death. Out of 12 cases of diarrhœa, 3 deaths. 1 of pertussis died. 4 of general hæmorrhage, all died.

Whilst expressing deep obligations to Deputy Inspector-General Balfour, Messrs. Harley, Timothy Holmes, Statham, Alder Smith, Grabham, and Staff Assistant-Surgeon Mackenzie for valuable information, may I venture to appeal to others for more, to assist in tracing the course of scarlet fever in various asylums, schools, institutions, and occupations. Poverty, misery, dirt, and overcrowding causing the disease, may there not be some hidden remedy yet undiscovered to stay the ravages of a pestilence that robs the poor equally with the pauper of his best-beloved child?

I am, Sir, your obedient servant,

R.A. Barracks, Woolwich, November, 1871. FRANCIS R. HOGG.

Dr. Wolfe, (Glasgow.)—We think our correspondent has not quite correctly understood the description of the first of the two operations to which he refers; and we venture to suggest to him to withhold his criticism of the second until after a somewhat larger experience of its results.

TAPPING IN GASEOUS INTESTINAL DISTENSION.

To the Editor of THE LANCET.

SIR,—In Dr. J. G. Davey's letter on this subject at page 419 of THE LANCET, September 16th, 1871, a claim appears to have been advanced by him as the first to recommend this mode of treatment. If he will refer to THE LANCET for December, 1844, at page 397 he will find the method in use, under the best possible sanction, many years since.

Dr. Houston, in his lecture on Modern Improvements in Surgery (delivered November 4th, 1844) says: "The same kind of practice (tapping with a fine trocar) has been applied by Sir Henry Marsh to excessive *distension of the abdomen from flatus*, with the most soothing result, and without any bad effects from the operation. I knew a lady on whom Mr. Cusack operated several times in this way, in consultation with Sir Philip Crampton and Sir Henry Marsh—the operation being performed with a fine trocar and canula,—and each time with much relief to the patient from the most painful suffering." Your obedient servant,

Plymouth, Oct. 31st, 1871. THOS. LITTLETON, M.B., F.R.C.S.

INCOME-TAX.

MR. JOHN H. WILLIS, Surgeon, of Lewdown, Exeter, communicates the following facts to the *Western Morning News*, illustrative of the arbitrary and oppressive way in which the Income-tax is now levied from professional men. Mr. Willis says that he has lately submitted to a heavy surcharge upon his return of profits rather than travel a long distance, and waste valuable time in making an appeal. In addition to this, he has now had a further assessment made upon him in respect of "profits of offices and emoluments," derived from a Poor-law appointment. Of course, as he says, the profits of this post were included by him in his return, upon which the Commissioners have already taxed him in excess at their own discretion. He received notice of the last assessment on October 31st, the day of appeal being fixed for November 1st. Thus, in order to get justice done him, he must travel twenty miles at a day's notice, and be exposed in all probability to great annoyance; for Commissioners and Surveyors of Taxes are apt to comport themselves in a fashion the reverse of agreeable. We fear MR. WILLIS's case is not a solitary example of the hardship which the Income-tax, as now levied, inflicts upon professional men.

Assistant-Surgeon Maunsell, (R.H.A.)—The subject to which our correspondent refers has been already alluded to in previous numbers of THE LANCET.

THE CONTAGIOUS DISEASES ACTS.

To the Editor of THE LANCET.

SIR,—May I be allowed, as a constant reader of THE LANCET, not in any way connected with the medical profession, to propose to you one or two of the questions which give me great uneasiness in reading your recent articles, notes and contributions of correspondents, on the Contagious Diseases Acts? For the sake of brevity, but with the utmost respect, for I highly value your journal, I will put what I have to say in the form of queries.

1st. Does THE LANCET represent the general opinion of medical men as to the retention and extension of these Acts?

2nd. With reference to what occurs in your issue of to-day (21st). If "a tradesman is liable to (State) inspection in his business," is he not also protected in many and various ways against injury from his customers? And since he is undoubtedly so protected, does not this require that the women in question should be protected by law against injury arising from *their* customers? And is not this the very protection that the opponents of the Acts desire? If men are to be protected by the State, so ought the women also; there ought to be inspection all round.

3rd. The opponents of the Acts maintain that the risk of infection keeps many from illicit intercourse. How is this contradicted by facts? Medical men see only those cases in which this fear of contagion has *not* proved effectual; they do not see, but they may easily know, that there are, and must be, innumerable cases where it has effectually restrained from vicious indulgence. I say this because it appears to be plain common sense. It would seem, indeed, that those, being viciously disposed, who are *not* thus restrained, are only brought up by catching the fearful disease, when, I suppose, they sin no more.

4th. Do not medical men lay too much stress on the tyranny and strength of the sexual appetite, and too little on the influence of morality, religion, experience, and reason? Men and women are under no necessity of sinning. If, indeed, men are prevented from marriage, as our sailors and soldiers are, the probability of immorality is immensely increased; but this only shows that the conditions imposed upon them are themselves evil. I had much rather see every man compelled to take his share in the defence of the country than lay a necessity of sinning upon a few.

5th. Is not the danger of degeneracy in the population from the spread of syphilis immensely exaggerated? Does it not rapidly destroy its subjects? And may not a large margin be left to the action of the principle of "natural selection"?

I am earnestly desirous of seeing what can be said in reply to these queries. THE LANCET will answer them if they can be answered, I honestly believe, and I shall feel greatly obliged if it will do so at the request of a

October 21st, 1871. CONSTANT READER.

*** Our correspondent approaches this very grave question with a decorum that we are most glad to recognise, and that induces us to reply, as fully as space may permit, to the queries he has put. We do not consider the subject a sufficiently medical one to be suited for exhaustive or frequent discussion in our columns. We are content, as a rule, to express our own feelings and opinions, and to do so very briefly, so that anything like a prolonged discussion must not be expected at our hands:—1. We believe that THE LANCET fairly represents the general opinion of medical men with regard to the Acts. The opinion of the leaders of the profession has been plainly and repeatedly expressed; and those who dissent from the general view are a minority, containing perhaps a few able, if eccentric, men, but still wholly unimportant both as regards numbers and standing.—2. We are not aware that tradespeople are in any special manner protected against injury from customers, and we do not see how the women in question can be protected against injury from their customers. The opponents of the Acts say that if women are to be examined, men ought to be examined also. Perhaps they ought; but the thing is not practicable. The women are a known class, the men not distinguishable from others; and it is not wise to refrain from securing an attainable good because some other good is entirely out of our reach. We might as well abandon the culture of strawberries because our climate will not ripen pineapples in the open air.—3. The allegation that the fear of infection keeps many from illicit intercourse is perhaps the only argument that has ever been advanced against the Acts, and it deserves examination. Speaking from long and extensive medical experience, we believe it to be wholly unfounded. Neither can we admit that medical men see "only those cases in which this fear has not proved effectual." Medical men are in confidential intercourse with people of both sexes, of all ages and ranks. They have constantly to inquire about the reproductive function and its exercise, and they are familiar with the habits in this respect of many who never contract disease. The fear of infection is generally most operative *after* intercourse; and when it does prevent intercourse (with prostitutes), it leads either to self-abuse or to the society of women who are accessible to individuals, but not to the public, and who, because they neglect the cleanliness and other business-like precautions of the common prostitute, are in reality far more dangerous than she. It is obvious that the dominion of a base passion, like fear of physical evil, excludes all high motives from operation, and would leave its subject quite prepared to gratify himself in any manner that might be consistent with his notions of safety Again, it is not true that those who incur disease "sin no more." Every surgeon knows that some men seem to have a special proclivity, and that they become infected over and over again. If disease produced continence, how would infection spread?—4. We have no means of knowing what stress medical men lay on the tyranny and strength of the sexual appetite, because each man would be likely to speak according to his own opportunities of observation. There can be no common consent upon such a point, and hardly any common measure of language. But there can be no doubt that the appetite is prodigiously strong, and that it differs from "morality, religion, experience, and reason" in being of spontaneous growth. It is well known to be especially powerful in large classes who are called religious, but whose religion consists in submission to excited feelings rather than in striving after purity and holiness of life. It has been very active in many men of great experience and of the highest reason, and seems indeed to bear some relation to the general force and vigour of the nervous system. It is quite true that men and women are under "no necessity" of sinning, and here and there a few may entirely control even strong sexual passions. But, as a matter of fact, the great majority of men do not so control them; and large numbers of continent women, both widows and the unmarried, suffer very seriously in health from the forced suppression of an important function. The business of a statesman is not to wait for some remote future of the human race, but to legislate for existing conditions, and for men and women as they are.—5. To the last question, as to its predecessor, no answer can be given. Some medical men attach more, others less, importance to syphilis as a cause of degeneracy. But we all know that it writes its characters with unmistakable hand upon children, and that it creeps out in individuals even in remote generations. Our correspondent should study the medical evidence given before the Royal Commission.—ED. L.

Incubation.—Observers estimate the period of incubation in cholera differently: some declaring it to be between one and three days; others that it may extend to between one and two weeks. Of course, it is rarely that we can fix the exact date of exposure to the virus. Still, observations are not wanting in which the period of incubation could be determined with tolerable accuracy; and the interval between exposure to the action of the poison and the outbreak of its manifestations was from one to three days.

"DYSPAREUNOS."

To the Editor of THE LANCET.

SIR,—"Amphibolus" will find the word in the Trachiniæ of Sophocles, line 791 (Oxford edition), in the following phrase:—"τὸ δυσπάρευνον λέκτρον ἐκτανύσασα." Homer uses the word *δύω* to express sexual intercourse; so perhaps *dyareunia* would convey Dr. Barnes's meaning as well as the longer, and therefore more inconvenient word "dyspareunia."

Yours faithfully,

October, 1871. A. B.

Medicus.—The question is one of taste rather than of law. The public—and, for that matter, the profession—understands by a physician one who devotes himself exclusively to the treatment of medical cases in consultation with general practitioners. But we do not think our correspondent would violate any law by using the title in question. The title does not admit of such exact definition as that of "doctor." The Colleges of Physicians should regulate the profession in this matter.

PENSIONS TO UNION MEDICAL OFFICERS.

To the Editor of THE LANCET.

SIR,—If every Board of Guardians take the same view of the claims of its superannuated medical officers as the Warminster Board, the Act of Parliament passed in their behalf is, in Lord Denman's words, "a mockery, a delusion, and a snare." Mr. Philip Grubb has been the surgeon of the Warminster Union for twenty-seven years, during which time not a single complaint has been made against him, while it is freely admitted that he has done his duty thoroughly and conscientiously. He is now, I am sorry to say, broken down by his labours, and obliged by ill-health and infirmity to retire from his post. It was under these circumstances that he applied to the Board for a pension or superannuation allowance under the Act of last year. The guardians met last week to consider his application, and assembled in full numbers. One guardian at once proposed that no allowance should be granted to their late medical officer; whereupon another guardian moved an amendment to the effect that their late medical officer should be granted an allowance of £50 a year. The amendment was rejected by a very large majority, the chairman, five *ex-officio* members, and two guardians voting in its favour, and as many as twenty-two against it. The ground of refusal was stated to be, not that Mr. Grubb was undeserving of, or did not require, the allowance, but that to grant it would be to create a precedent! The Legislature empowered Boards of Guardians to grant a pension or retiring allowance to their medical officers, and the Warminster Board will not avail itself of the power lest a precedent should be established for availing itself of the power! The refusal is the more astounding because the guardians subsequently passed a vote of thanks to Mr. Grubb for his long and meritorious services. He asked for bread, and they gave him—a resolution.

Yours, &c.

November, 1871. A SOUTH WILTS SURGEON.

THE OXYHYDRIC LIGHT.

An interesting experiment is in progress at the Crystal Palace, which is now lighted with the oxyhydric light. The advantages offered by this light are great steadiness, whiteness, and power. It is as superior to common gas-light as that is to a farthing dip. It is produced by effecting combustion by means of pure oxygen instead of by atmospheric air. The great novelty is the mode of preparing the oxygen—viz., by means of manganate of soda, which substance, when alternately heated in air and steam, acts as a carrier of oxygen. Hitherto the bar to the practical applications of pure oxygen has been the expense of obtaining it; but the new process, which uses up no materials (only the coal necessary to heat the retort and to boil the water), has rendered pure oxygen a very cheap gas. Should the new light become general—and there is a fair chance of its becoming so,—we may expect fewer weak eyes.

Justitia has omitted to enclose his card. We believe, however, that the authorities have no intention of the kind.

A Surgeon.—The subject has been noticed on more than one occasion previously.

EQUITY.

To the Editor of THE LANCET.

SIR,—May I ask the favour of your inserting the following reply to Dr. Wright's letter in your impression of October 28th.

In the first place, I beg to state that had not the lady, whom I am accused of having "adroitly imported into the question," expressed her wish to be introduced to me through the medium of her family medical man, I should have declined the offer, and mentioned Dr. Wright's name as my successor; but I have merely exercised a privilege which our agreement gives to us both equally; Dr. Wright being prohibited from practising in the East End district, except he be requested to do so at the patient's desire, in which case I should consider, as in the present instance, he would not be called upon to mention even his agreement with me.

With regard to introduction. By the desire of Dr. Wright, shortly after the transfer of that part of my practice was arranged, the circular, a copy of which I enclose, was sent round to every patient in the district, and, where desired, a personal introduction was given, besides which I informed all of my friends who were not patients in that district that I had disposed of that portion of my practice to Dr. Wright.

I have sent the agreement between Dr. Wright and myself for your perusal, from which, and with the facts with which you are acquainted, I shall feel obliged by your expressing an opinion.

I am, Sir, yours obediently,

East End, Finchley, Nov. 6th, 1871. JAMES HOCHEE.

Copy of Letter sent to Patients at time of Transfer.

East End, Finchley, Jan. 29th, 1870.

SIR,—I beg to inform you that on the 1st January last I disposed of that portion of my practice situate at Church End, Finchley, together with the appointment of medical officer to Christ's College, to Dr. Wright, of Grove Cottage, Church End (my late assistant).

Having had considerable opportunity of observing his zeal and professional ability, I have much pleasure in introducing him as my successor, and trust that you will repose in him that confidence you have hitherto placed in me. I am, Sir, yours very truly,

JAMES HOCHEE.

*** The agreement provides, we observe, "that if any persons residing in the said Church End district, of their own free will and choice, desire to become or continue patients of the said James Hochee, nothing herein contained shall be construed into a prohibition against the said James Hochee accepting and attending upon them as their medical adviser."—ED. L.

X.—1. It would be within the right of our correspondent to forward a list; but it would be more gracious not to do so. And this course does not seem to us necessary. The patients in question will probably give the information he speaks of, which will come better from them than from him. And the advent of "Novus," and even a visit from him, will not be likely to affect "X.'s" interests.—2. We would insert the paper spoken of either as a paper or letter, though some therapeutical facts should be procured if possible.

WE have received a long letter from *Mr. Delamark Freeman*, but it arrived too late for insertion this week.

UNQUALIFIED PRACTITIONERS AND BOUGHT DEGREES.

To the Editor of THE LANCET.

SIR,—On a former occasion you were good enough to insert in your journal a letter from me with regard to two unqualified practitioners who have been flourishing for some time past in this part of London, and I mentioned that within the last few months one of them had prefixed "Dr." to his name, and the other placed "M.B." after his. On inquiry I found that they had purchased, without examination, some of the so-called degrees now advertised for sale in the daily papers. The Registrar of the Medical Council has informed me that anyone may prosecute such persons; that MR. KNOX, of the Marlborough-street Police Office, has recently convicted and fined in similar cases; and that in the event of a fine being inflicted, the Medical Council would remit a part or whole of such fine towards defraying the expenses of prosecution. It is difficult, if not impracticable, for a single medical man to act in such a matter, and therefore it is necessary that there should be united effort on the part of the profession, and even under the present imperfect law much could be done in protecting ourselves and the public from the unqualified practitioners who abound in this metropolis. Would it not be feasible to form a Medical Society for the special purpose of proceeding against those not legally qualified to practise. I am sure that neither the influence nor money of the profession would be wanting, and one advantage at least would be gained—viz., directing public attention to the point.

I am, Sir, yours, &c.,

Golborne-road, W., November, 1871. WM. ACKERMAN.

CORONERS AND MEDICAL EVIDENCE.

At an inquest recently held at Sunderland, the coroner was pleased to remark incidentally on the practice of medical men refusing to give a certificate in cases where they were called in after death. He added that this course was frequently adopted even in cases where no doubt existed as to the cause of death, in order that the doctor might be called at the inquest and receive his fee. Aware of this, he never called medical testimony where, apart from it, efficient evidence on which to found a verdict was obtainable. We should like to know why a medical man is required to certify to that of which he cannot be certain? How can he tell the cause of death from inspecting a dead body? As to the unworthy motive alluded to by the coroner, we do not at all believe in its existence.

Dr. Williams, (Hayward's Heath.)—Our advertising columns will give the required information.

WELL-OILED URETHRA *vice* WELL-OILED CATHETER.

To the Editor of THE LANCET.

SIR,—The plan which I am about to describe is so simple that possibly it may have occurred to many others besides myself; but as I have never heard of it being tried, I venture to ask you to spare me a small space to record it.

In cases of retention of urine in the male, we are advised by some authorities to use a well-oiled catheter, by others to anoint the catheter with cold cream, &c.; yet it has seemed to me that, however carefully the instrument may be greased, the dry irritable urethra wipes off the greater part, if not the whole, of the oily material from the most important part—viz., the point—long before it reaches the stricture or other impediment, and that dry point, not passing easily over the equally dry surface of the urethra, is apt to be impeded in its transit, even before it reaches the stricture, by folds of mucous membrane, &c. It struck me some time since that the injection of oil into the urethra would meet the difficulty better than oiling the catheter, and on trying it I was very much pleased with the easy way in which the catheter glided down the canal as far as, and after a short time through, the stricture, which had previously given me considerable trouble, and my patient a corresponding amount of suffering.

My plan is to fill an ordinary glass syringe with oil, and inject as much as possible into the urethra, being careful to compress the end of the penis firmly between the finger and thumb of the left hand while injecting, and after withdrawing the syringe, until the point of the catheter is inserted; then to proceed in the usual way. If careful compression be neglected, the elasticity of the urethra drives out a great part of the oil, and one great advantage, that of distension of the canal, is lost.

The advantages which I claim for my method are: that the urethra is cooled and rendered less irritable by the oil; that, being distended, any folds of mucous membrane which might otherwise catch the point of the catheter are kept out of the way; and that the interior of the stricture itself, which by the ordinary plan must receive a very homœopathic dose of oil (and one is naturally desirous of excluding homœopathy from surgery), is treated to as free a supply of the lubricating fluid as its calibre will allow. I have found some of the oil in the urine in a case which was impermeable to the catheter, and in which it became necessary to relieve the bladder by the trocar.

The comfort expressed by patients and the saving of time to one's self are not the least among the reasons which have induced me to trespass so far on your valuable space. Yours faithfully,

Grimston, Lynn, Norfolk, Oct. 30th, 1871. A. E. BARRETT.

S. M. E.—Parkes on Practical Hygiene; the New Sanitary Laws; Lumley; the Duties of Medical Officers of Health; Minutes of General Board of Health; Reports of Medical Officer of Privy Council. It is our intention shortly to issue a series of articles on the Sanitary Organisation of Urban and Rural Districts, in which the duties of a medical officer of health will be fully gone into.

THE DEGREE OF M.D. IN LONDON: THE MAURITIAN DEGREE.

To the Editor of THE LANCET.

SIR,—I notice that in your article on this subject in THE LANCET of the 28th ultimo, you mention a degree of M.D. from "the Mauritius." Recently resident there as medical superintendent of the Poor-law Commission, I am in a position to assure you that there is no university and no licensing body in that colony. Mauritians gain their professional education in England or France. There is a Royal College which grants annually something like £150 or £200 a year for three or four years, and a free passage to England and back, to the most distinguished student or students of the year; not among the least of these stands the name of Dr. Brown-Séquard.

Yours faithfully,

November 1st, 1871. W. H. CECIL TEGNER, M.D.

Stuart, (Manchester.)—We cannot call to mind any observation of the kind. In so far as their appearance is to be considered the result of age, it would imply a corresponding diminution in the physiological powers of the body.

THE SANITARY CONDITION OF CHESHAM.

To the Editor of THE LANCET.

SIR,—In your impression of Oct. 21st you noticed the lamented death of Dr. Faithorn, of Chesham, from fever taken in the incessant discharge of his duty. On the 28th, a nurse of St. John's House, sent for by him to nurse the poor, died also of the same fever, after three weeks' devoted nursing, and was followed to the grave by above 400 people of all classes in Chesham. The Vicar has now taken the fever. Two of St. John's nurses are still working at Chesham, and an Iron hospital has been opened, to which all fresh cases are removed. But the dirt and destitution of the poor, and the filthy condition of their dwellings, surpass even the wynds and closes of Edinburgh: heaps of refuse outside the doors of their cottages, and the sick lying in many cases on rotten beds of straw on the floor, three and four in a bed, often with scarce a rag of clothing but the coverlid or blanket.

I am, Sir, yours, &c.,

November 1st, 1871. AN EYE-WITNESS.

SMALL-POX AT LISKEARD.

LISKEARD, like other places, has been visited by small-pox. It seems that the disease first made its appearance in the district in two different centres. In one case the contagion was conveyed from Northumberland by a family that returned from the coal mines; in the other the disease was brought by a servant girl from Devonport. In the first, the mother showed symptoms of small-pox eight days after her appearance in the locality, and her attack was followed by that of all the grown-up members of the family, five in number, while the youngest members escaped. Dr. Mackintosh, of Liskeard, makes a practical suggestion, to the effect that much benefit would accrue from some Act that would enforce the disinfection of all persons leaving localities where small-pox was raging.

INHALATION IN PULMONARY AFFECTIONS.

To the Editor of THE LANCET.

SIR,—Permit me to add my testimony to that of your correspondent "M.A., M.D.," as to the value of inhalation in the above diseases. In the following cases it appeared to be of great service.

Mrs. C——, aged seventy-one, the subject of spasmodic asthma, applied to me for relief. The paroxysms were of the most violent kind, rendering it impossible for her to obtain rest at night. I put her under the routine treatment without any result. She got rather worse. I then tried the inhalation of the vapor conii (B.P.), twenty drops in water of 120°. It was followed by a signal diminution of all the symptoms, and after ten days the spasms disappeared, and she became comparatively well.

Miss C——, daughter of the above, aged thirty-one, subject of chronic phthisis, with consolidation of upper part of right lung, came under my notice in August last. She then had a dangerous attack of typhoid, which was followed by emaciation, diaphoresis, and hacking cough. With other treatment I prescribed expectorants, sedatives, &c., with no advantage. I then tried moist inhalations of conium and hyoscyamus. The result was, the cough gradually ceased, and appetite and comparative health have returned. Of course I gave other medicine for the diaphoresis, &c.

As your correspondent remarks, "Inhalation is as yet in its infancy"; but it seems to me to offer a rational mode of treatment, especially in pulmonary affections, and I think deserves more attention than it has hitherto received.

I am, Sir, yours obediently,
Ilfracombe, November, 1871. E. F. H. BURROUGHS, M.R.C.S.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent, "F.R.C.S.," I may say that in a case of pulmonary hæmoptysis which I had under my care last year, I gave gallic acid in scruple doses, at first every hour, then every two, and then every three hours, with no bad result, but the reverse. I had previously given gallic acid in ten-grain doses with digitalis, and liquid extract of ergot, and then acetate of lead, without success. When I employ gallic acid I do not hesitate to give twenty-grain doses.

I am, Sir, your obedient servant,
Weymouth, Nov. 6th, 1871. WM. VAWDREY LUSH, M.D. Lond.

H. D.—It is usual for the district medical officer to give a certificate as to the physical state of any pauper, his ability to work, or his fitness for removal to the workhouse on the requisition of the relieving officer. But it is important that such certificates should not be given to persons already entered in the medical relief-book, and there reported on, except in urgent cases, because they are very apt to become the medium of imposition, the person feigning illness in order to obtain relief. Such certificates also tend to remove from the relieving officer the responsibility of making proper inquiries as to the real state of the case. We are of opinion that in no case should these reports be given into the hands of paupers, but should be considered confidential. If the demand for such certificates become improperly frequent, remonstrance should be made to the relieving officer, and to the guardians if that should fail.

AUSTRALIAN MEAT.

To the Editor of THE LANCET.

SIR,—I have been anxiously expecting some notice would appear in your columns respecting the nutritious quality of the preserved meat now being largely imported into England from Australia. As it has not yet been commented on by you, I venture to hope that reference to a matter of such great importance to thousands of small families, who are only waiting to be assured of its wholesomeness and nutritive qualities by a competent and uninterested authority to adopt it as an article of diet, will not be much longer delayed. I am quite sure that an analysis of its constituents, accompanied by an editorial notice, would be gladly received, and would enable medical men to largely recommend it amongst those who, in consequence of the present high price of English-killed meat, are suffering from the want of such a substitute. A fear has been expressed to me lest the gases evolved during the cooling of the meat, when enclosed in air-tight tins, should, in undergoing condensation, impregnate the contents with some deleterious qualities; and I may mention that on the one occasion when it was eaten by the members of my household, the odour of the meat was quickly after its reception exactly reproduced in the urine.

I remain, Sir, your obedient servant,
Rolvenden, Oct. 28th, 1871. THOS. JOYCE.

*** It will be observed that our opinion of the meat is given elsewhere.—ED. L.

FOREIGN DEGREES.

To the Editor of THE LANCET.

SIR,—In answer to the letter of "A M.D. of New York," I can inform him that in this immediate district there is a person who sports "M.D., LL.D.," after his name (American obtained), and that the same person never saw America. It is a disgrace that men should be permitted to use the highest degrees that can be obtained in this country, when obtained in such a manner. It is only known among medical men how such degrees are obtained; nor should there be free trade for such, when honest English degrees are not sanctioned on many parts of the Continent.

Yours truly,
Brierley Hill, Oct. 31st, 1871. EDW. S. PEARSE, M.R.C.S.

Mr. E. D. Harding.—The instructional minute relative to the duties and qualifications of officers of health was issued by the General Board of Health in 1848, and it has not at the present moment any legal force. The minute describes the object of appointing such an officer, and enumerates his duties in considerable detail. It also states that he should be qualified for their performance by a knowledge of pathology, vital statistics, chemistry, and natural philosophy. It is pointed out that the best training for the general duties of the medical profession is also the best training for the duties of an officer of health. The minute states that, whilst the occupation of an officer of health will not usually be inconsistent with his devoting a portion of his time to certain other professional engagements, it is generally better that he should not be engaged in private practice. Presuming that all the candidates were duly qualified medical practitioners, it is certain that they were all eligible, and we are, therefore, at a loss to understand the meaning of the resolution passed by the Sanitary Committee at Warrington.

THE GEOGRAPHY OF THE MEDICAL DIRECTORY.

To the Editor of THE LANCET.

SIR,—There is one thing that anyone who frequently has to consult the Medical Directory will feel to be a very desirable addition to that work, and that is a carefully got-up Map of Great Britain and Ireland. It should be coloured, and mounted on calico or any stout and strong material, and fold up for insertion in a pocket made in the cover of the Directory. Its additional expense would be small, and the volume for 1872 would then be more handy, useful, and complete. Many a journey to the bookshelf for the family atlas or map would thereby be spared.

Your obedient servant,
November 8th, 1871. M.R.C.S.

ERRATA.—In the letter of Mr. J. T. C. Ross published in our last number, page 656, 2nd col., line 21, for "some men of eminence," read "some medical men of eminence." — On page 662, the gentleman's name alleged to possess the degree of Mauritius is given as "Raleigh." It should have been "Eveleigh."

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Rutherford; Dr. Williams, Malvern; Mr. Blackett; Dr. Headley, Warwick, Queensland; Mr. Lisy, Verona; Mr. Mavor; Mr. Davie, Neuagh; Dr. Smith, Halifax; Dr. Akerman; Mr. Wilkinson; Mr. Ross, Budleigh Salterton; Dr. Wood, Gateshead; Mr. Waller; Mr. Donovan; Mr. Hayling; Mr. B. Channing; Mr. Corfield; Mr. Watson, Abergavenny; Mr. Pritchett; Mr. R. Swaine, Sydney; Mr. T. S. Smith; Dr. Hawkes, Hanwell; Mr. Gray; Mr. Aubrey; Dr. M'Callum; Mr. Hunter; Dr. Woodward; Mr. Middleton; Mr. Stocker; Mr. Freeman; Dr. Rooth; Mr. Jeffery; Mr. Caskie; Mr. Ferguson; Dr. Walker; Mr. Landford; Dr. Molony; Dr. Russell; Dr. Pritchard; Mr. Cammock; Dr. Lorimer; Mr. Cogan; Mr. Clemenger; Dr. Boydell; Dr. Barclay, Madras; Mr. Eadon; Dr. Borham, Halstead; Dr. Stevenson, Wroughton; Dr. Munro, Melrose; Dr. Wolfe, Glasgow; Mr. Metcalfe; Dr. Lush, Weymouth; Mr. Lewis; Mr. Beck, Cambridge; Mr. Burroughs, Ilfracombe; Mr. F. Churchill; Dr. Sutherland, Knaresborough; Mr. Mills; Dr. Williams, Haywards Heath; Mr. Ensor, Tisbury; Dr. Gabe, Merthyr; Mr. Hardyman, Worcester; Dr. Matthews, Yealand Conyers; Mr. Hochee, Finchley; Mr. Morland; Mr. Harding, Dalton-in-Furness; Mr. Robinson; Mr. Peck; Dr. Bristowe; Mr. Perry; Mr. Bailey, Blackford; Mr. Coghill; Dr. Newhouse, Birmingham; Mr. Herring, Hartlepool; Mr. Waghorn; Mr. Roper, Ware; Mr. Rayner; Mr. Henfrey; Mr. De Gex; Mr. Peters; Dr. Davies; Mr. Clement; Mr. Hay; Mr. Anderson; Dr. Laffan, Cashel; Mr. Philipps; Mr. J. Taylor; Dr. Clifford Allbutt; Mr. Southwood; Dr. Neale; Mr. R. Webster; Mr. Istance, Risca; Mr. Nicholls; Mr. Bryan, Waterford; Mr. Harman, Chatteris; Mr. Smith, Glasgow; Mr. Bennett, Cork; Mr. Evans; Mr. Marsh, Sudbury; Mr. Robertson; Dr. Fothergill; Mr. Brooke, Brighton; Mr. James, Gateshead; Mr. Kemp; Dr. Dougall; Dr. Young, Malton; Mr. Chorley, Burnham; Mr. Murphy; Mr. Gillespie, Sherburn; Mr. Grant, Northampton; Mr. Barnett; Mr. Walton, Barnley; Mr. Johnson, Finchley; Dr. Buck; Mr. A. H. Savory; A Surgeon; M.D.; Epsilon; General Practitioner; Muddled; Allopathist; &c. &c.

Drawing-room Gazette, Liverpool Weekly Albion, Belfast Evening Telegraph, Levant Times, Temperance Record, Bucks Advertiser, Portsmouth Times, Food Journal, Manchester Medical and Surgical Reports, Worcestershire Chronicle, Chorley Guardian, Australian Medical Gazette, Journal de Médecine (Brussels), *Lincolnshire Chronicle, Melbourne Argus, Yorkshire Telegraph*, and *Food, Water, and Air*, have been received.

TERMS FOR ADVERTISING IN THE LANCET.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.

CAUTION.

It having come to the knowledge of the Publisher that circulars have been distributed calculated to mislead advertisers as to the circulation of this journal, he feels it incumbent on him to state that its circulation far exceeds that of any other medical periodical, and that it has for many years past steadily increased, and is still increasing.